



Lys Pro Leu Val Ala Glu Thr Asp Ser Pro His Arg Ala Ala Phe Val  
405 410 415

Val Gly Gly Ser Ser Phe Pro Asp Thr Ser Leu Val Leu Glu Thr Lys  
420 425 430

Glu Pro Glu Ile Glu Leu Pro Lys Glu Pro Arg Pro Asn Glu Glu Cys  
435 440 445

Leu Gln Ile Leu Gly Asn Ala Glu Lys Gly Ala Lys Phe Leu Ser Asp  
450 455 460

Ala Glu Ile Ile Gln Leu Val Asn Ala Lys His Ile Pro Ala Tyr Lys  
465 470 475 480

Leu Glu Thr Leu Met Glu Thr His Glu Arg Gly Val Ser Ile Arg Arg  
485 490 495

Gln Leu Leu Ser Lys Lys Leu Pro Glu Pro Ser Ser Leu Gln Tyr Leu  
500 505 510

Pro Tyr Arg Asp Tyr Asn Tyr Ser Leu Val Leu Gly Ala Cys Cys Glu  
515 520 525

Asn Val Ile Gly Tyr Met Pro Ile Pro Val Gly Val Val Gly Pro Leu  
530 535 540

Cys Leu Asp Gly Lys Glu Phe Gln Val Pro Met Ala Thr Thr Glu Gly  
545 550 555 560

Cys Leu Val Ala Ser Thr Asn Arg Gly Cys Arg Ala Ile Cys Leu Gly  
565 570 575

Gly Gly Ala Ser Ser Arg Val Leu Ala Asp Gly Met Thr Arg Gly Pro  
580 585 590

Val Val Arg Leu Pro Arg Ala Cys Asp Ser Ala Glu Val Lys Ala Trp  
595 600 605

Leu Glu Thr Pro Glu Gly Phe Ala Val Ile Lys Glu Ala Phe Asp Ser  
610 615 620

Thr Ser Arg Phe Ala Arg Leu Gln Lys Leu His Ile Ser Met Ala Gly  
625 630 635 640

Arg Asn Leu Tyr Ile Arg Phe Gln Ser Arg Thr Gly Asp Ala Met Gly  
645 650 655

Met Asn Met Ile Ser Lys Gly Thr Glu Lys Ala Leu Ser Lys Leu His  
660 665 670

Glu Tyr Phe Pro Glu Met Gln Ile Leu Ala Val Ser Gly Asn Tyr Cys  
675 680 685

Thr Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly Lys  
690 695 700

Thr Val Val Cys Glu Ala Val Ile Pro Ala Lys Val Val Arg Glu Val  
705 710 715 720

Leu Lys Thr Thr Thr Glu Ala Met Ile Asp Val Asn Ile Asn Lys Asn  
725 730 735

Leu Val Gly Ser Ala Met Ala Gly Ser Ile Gly Gly Tyr Asn Ala His  
740 745 750

Ala Ala Asn Tyr Val Thr Ala Ile Tyr Ile Ala Cys Gly Gln Asp Ala  
755 760 765

Ala Gln Asn Val Gly Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser  
770 775 780

Gly Pro Pro Asn Glu Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile  
785 790 795 800

Glu Ile Gly Thr Val Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala  
805 810 815

Cys Leu Gln Met Leu Gly Val Gln Gly Ala Cys Lys Asp Ser Pro Gly  
820 825 830

Glu Asn Ala Arg Gln Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala  
835 840 845

Gly Glu Leu Ser Leu Met Ala Ala Leu Ala Ala Gly His Leu Val Lys  
850 855 860

Ser His Met Ile His Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Glu  
865 870 875 880

Gly Ala Cys Thr Lys Lys Ala Ala  
885

<210> 289  
<211> 887  
<212> PRT  
<213> Rattus norvegicus

<400> 289

Met Leu Ser Arg Leu Phe Arg Met His Gly Leu Phe Val Ala Ser His  
1 5 10 15

Pro Trp Glu Val Ile Val Gly Thr Val Thr Leu Thr Ile Cys Met Met  
20 25 30

Ser Met Asn Met Phe Thr Gly Asn Asn Lys Ile Cys Gly Trp Asn Tyr  
35 40 45

Glu Cys Pro Lys Phe Glu Glu Asp Val Leu Ser Ser Asp Ile Ile Ile  
50 55 60

Leu Thr Ile Thr Arg Cys Ile Ala Ile Leu Tyr Ile Tyr Phe Gln Phe  
65 70 75 80

Gln Asn Leu Arg Gln Leu Gly Ser Lys Tyr Ile Leu Gly Ile Ala Gly  
85 90 95

Leu Phe Thr Ile Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His  
100 105 110

Phe Leu Asp Lys Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe  
115 120 125

Leu Leu Leu Ile Asp Leu Ser Arg Ala Ser Ala Leu Ala Lys Phe Ala  
130 135 140

Leu Ser Ser Asn Ser Gln Asp Glu Val Arg Glu Asn Ile Ala Arg Gly  
145 150 155 160

Met Ala Ile Leu Gly Pro Thr Phe Thr Leu Asp Ala Leu Val Glu Cys  
165 170 175

Leu Val Ile Gly Val Gly Thr Met Ser Gly Val Arg Gln Leu Glu Ile  
180 185 190

Met Cys Cys Phe Gly Cys Met Ser Val Leu Ala Asn Tyr Phe Val Phe  
195 200 205

Met Thr Phe Phe Pro Ala Cys Val Ser Leu Val Leu Glu Leu Ser Arg  
210 215 220

Glu Ser Arg Glu Gly Arg Pro Ile Trp Gln Leu Ser His Phe Ala Arg  
225 230 235 240

Val Leu Glu Glu Glu Asn Lys Pro Asn Pro Val Thr Gln Arg Val  
245 250 255

Lys Met Ile Met Ser Leu Gly Leu Val Leu Val His Ala His Ser Arg  
260 265 270

Trp Ile Ala Asp Pro Ser Pro Gln Asn Ser Thr Ala Glu Gln Ser Lys  
275 280 285

Val Ser Leu Gly Leu Ala Glu Asp Val Ser Lys Arg Ile Glu Pro Ser  
290 295 300

Val Ser Leu Trp Gln Phe Tyr Leu Ser Lys Met Ile Ser Met Asp Ile  
305 310 315 320

Glu Gln Val Ile Thr Leu Ser Leu Ala Leu Leu Leu Ala Val Lys Tyr  
325 330 335

Ile Phe Phe Glu Gln Ala Glu Thr Glu Ser Thr Leu Ser Leu Lys Asn  
340 345 350

Pro Ile Thr Ser Pro Val Val Thr Pro Lys Lys Ala Gln Asp Asn Cys  
355 360 365

Cys Arg Arg Glu Pro Leu Leu Val Arg Arg Asn Gln Lys Leu Ser Ser  
370 375 380

Val Glu Glu Asp Pro Gly Val Asn Gln Asp Arg Lys Val Glu Val Ile  
385 390 395 400

Lys Pro Leu Val Ala Glu Ala Glu Thr Ser Gly Arg Ala Thr Phe Val  
405 410 415

Leu Gly Ala Ser Ala Ala Ser Pro Pro Leu Ala Leu Gly Ala Gln Glu  
420 425 430

Pro Gly Ile Glu Leu Pro Ser Glu Pro Arg Pro Asn Glu Glu Cys Leu  
435 440 445

Gln Ile Leu Glu Ser Ala Glu Lys Gly Ala Lys Phe Leu Ser Asp Ala  
450 455 460

Glu Ile Ile Gln Leu Val Asn Ala Lys His Ile Pro Ala Tyr Lys Leu  
465 470 475 480

Glu Thr Leu Met Glu Thr His Glu Arg Gly Val Ser Ile Arg Arg Gln  
485 490 495

Leu Leu Ser Ala Lys Leu Ala Glu Pro Ser Ser Leu Gln Tyr Leu Pro  
500 505 510

Tyr Arg Asp Tyr Asn Tyr Ser Leu Val Met Gly Ala Cys Cys Glu Asn  
515 520 525

Val Ile Gly Tyr Met Pro Ile Pro Val Gly Val Ala Gly Pro Leu Cys  
530 535 540

Leu Asp Gly Lys Glu Tyr Gln Val Pro Met Ala Thr Thr Glu Gly Cys  
545 550 555 560

Leu Val Ala Ser Thr Asn Arg Gly Cys Arg Ala Ile Ser Leu Gly Gly  
565 570 575

Gly Ala Ser Ser Arg Val Leu Ala Asp Gly Met Ser Arg Gly Pro Val  
580 585 590

Val Arg Leu Pro Arg Ala Cys Asp Ser Ala Glu Val Lys Ser Trp Leu  
595 600 605

Glu Thr Pro Glu Gly Phe Ala Val Val Lys Glu Ala Phe Asp Ser Thr  
610 615 620

Ser Arg Phe Ala Arg Leu Gln Lys Leu His Val Thr Leu Ala Gly Arg  
625 630 635 640

Asn Leu Tyr Ile Arg Leu Gln Ser Lys Thr Gly Asp Ala Met Gly Met  
645 650 655

Asn Met Ile Ser Lys Gly Thr Glu Lys Ala Leu Leu Lys Leu Gln Glu  
660 665 670

Gly Val Pro Glu Leu Gln Ile Leu Ala Val Ser Gly Asn Tyr Cys Thr  
675 680 685

Asp Lys Lys Pro Ala Ala Ile Asn Trp Ile Glu Gly Arg Gly Lys Thr  
690 695 700

Val Val Cys Glu Ala Val Ile Pro Ala Lys Val Val Arg Glu Val Leu  
705 710 715 720

Lys Thr Thr Thr Glu Ala Met Val Asp Val Asn Ile Asn Lys Asn Leu  
725 730 735

Val Gly Ser Ala Met Ala Gly Ser Ile Gly Gly Tyr Asn Leu His Ala  
740 745 750

Ala Asn Ile Val Thr Ala Ile Tyr Ile Ala Cys Gly Gln Asp Ala Ala  
755 760 765

Gln Asn Val Gly Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser Gly  
770 775 780

Pro Thr Asn Glu Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile Glu  
785 790 795 800

Ile Gly Thr Val Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala Cys  
805 810 815

Leu Gln Met Leu Gly Val Gln Gly Ala Cys Lys Asp Asn Pro Gly Glu  
820 825 830

Asn Ala Arg Gln Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala Gly  
835 840 845

Glu Leu Ser Leu Met Ala Ala Leu Ala Ala Gly His Leu Val Arg Ser  
850 855 860

His Met Val His Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Gln Gly  
865 870 875 880

Thr Cys Thr Lys Lys Ala Ala  
885

<210> 290  
<211> 491  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 290

Met Lys Leu Ser Thr Lys Leu Cys Trp Cys Gly Ile Lys Gly Arg Leu  
1 5 10 15

Arg Pro Gln Lys Gln Gln Leu His Asn Thr Asn Leu Gln Met Thr  
20 25 30

Glu Leu Lys Lys Gln Lys Thr Ala Glu Gln Lys Thr Arg Pro Gln Asn  
35 40 45

Val Gly Ile Lys Gly Ile Gln Ile Tyr Ile Pro Thr Gln Cys Val Asn  
50 55 60

Gln Ser Glu Leu Glu Lys Phe Asp Gly Val Ser Gln Gly Lys Tyr Thr  
65 70 75 80

Ile Gly Leu Gly Gln Thr Asn Met Ser Phe Val Asn Asp Arg Glu Asp  
85 90 95

Ile Tyr Ser Met Ser Leu Thr Val Leu Ser Lys Leu Ile Lys Ser Tyr  
100 105 110

Asn Ile Asp Thr Asn Lys Ile Gly Arg Leu Glu Val Gly Thr Glu Thr  
115 120 125

Leu Ile Asp Lys Ser Lys Ser Val Lys Ser Val Leu Met Gln Leu Phe  
130 135 140

Gly Glu Asn Thr Asp Val Glu Gly Ile Asp Thr Leu Asn Ala Cys Tyr  
145 150 155 160

Gly Gly Thr Asn Ala Leu Phe Asn Ser Leu Asn Trp Ile Glu Ser Asn  
165 170 175

Ala Trp Asp Gly Arg Asp Ala Ile Val Val Cys Gly Asp Ile Ala Ile  
180 185 190

Tyr Asp Lys Gly Ala Ala Arg Pro Thr Gly Gly Ala Gly Thr Val Ala  
195 200 205

Met Trp Ile Gly Pro Asp Ala Pro Ile Val Phe Asp Ser Val Arg Ala  
210 215 220

Ser Tyr Met Glu His Ala Tyr Asp Phe Tyr Lys Pro Asp Phe Thr Ser  
225 230 235 240

Glu Tyr Pro Tyr Val Asp Gly His Phe Ser Leu Thr Cys Tyr Val Lys  
245 250 255

Ala Leu Asp Gln Val Tyr Lys Ser Tyr Ser Lys Lys Ala Ile Ser Lys  
260 265 270

Gly Leu Val Ser Asp Pro Ala Gly Ser Asp Ala Leu Asn Val Leu Lys  
275 280 285

Tyr Phe Asp Tyr Asn Val Phe His Val Pro Thr Cys Lys Leu Val Thr  
290 295 300

Lys Ser Tyr Gly Arg Leu Leu Tyr Asn Asp Phe Arg Ala Asn Pro Gln  
305 310 315 320

Leu Phe Pro Glu Val Asp Ala Glu Leu Ala Thr Arg Asp Tyr Asp Glu  
325 330 335

Ser Leu Thr Asp Lys Asn Ile Glu Lys Thr Phe Val Asn Val Ala Lys  
340 345 350

Pro Phe His Lys Glu Arg Val Ala Gln Ser Leu Ile Val Pro Thr Asn  
355 360 365

Thr Gly Asn Met Tyr Thr Ala Ser Val Tyr Ala Ala Phe Ala Ser Leu  
370 375 380

Leu Asn Tyr Val Gly Ser Asp Asp Leu Gln Gly Lys Arg Val Gly Leu  
385 390 395 400

Phe Ser Tyr Gly Ser Gly Leu Ala Ala Ser Leu Tyr Ser Cys Lys Ile  
405 410 415

Val Gly Asp Val Gln His Ile Ile Lys Glu Leu Asp Ile Thr Asn Lys  
420 425 430

Leu Ala Lys Arg Ile Thr Glu Thr Pro Lys Asp Tyr Glu Ala Ala Ile  
435 440 445

Glu Leu Arg Glu Asn Ala His Leu Lys Lys Asn Phe Lys Pro Gln Gly  
450 455 460

Ser Ile Glu His Leu Gln Ser Gly Val Tyr Tyr Leu Thr Asn Ile Asp  
465 470 475 480

Asp Lys Phe Arg Arg Ser Tyr Asp Val Lys Lys  
485 490

<210> 291  
<211> 447  
<212> PRT  
<213> Schizosaccharomyces pombe

<400> 291

Met Ser Phe Asp Arg Lys Asp Ile Gly Ile Lys Gly Leu Val Leu Tyr  
1 5 10 15

Thr Pro Asn Gln Tyr Val Glu Gln Ala Ala Leu Glu Ala His Asp Gly  
20 25 30

Val Ser Thr Gly Lys Tyr Thr Ile Gly Leu Gly Leu Thr Lys Met Ala  
35 40 45

Phe Val Asp Asp Arg Glu Asp Ile Tyr Ser Phe Gly Leu Thr Ala Leu  
50 55 60

Ser Gln Leu Ile Lys Arg Tyr Gln Ile Asp Ile Ser Lys Ile Gly Arg  
65 70 75 80

Leu Glu Val Gly Thr Glu Thr Ile Ile Asp Lys Ser Lys Ser Val Lys  
85 90 95

Ser Val Leu Met Gln Leu Phe Gly Asp Asn His Asn Val Glu Gly Ile  
100 105 110

Asp Cys Val Asn Ala Cys Tyr Gly Gly Val Asn Ala Leu Phe Asn Thr  
115 120 125

Ile Asp Trp Ile Glu Ser Ser Ala Trp Asp Gly Arg Asp Gly Ile Val  
130 135 140

Val Ala Gly Asp Ile Ala Leu Tyr Ala Lys Gly Asn Ala Arg Pro Thr  
145 150 155 160

Gly Gly Ala Gly Cys Val Ala Leu Leu Val Gly Pro Asn Ala Pro Ile  
165 170 175

Val Phe Glu Pro Gly Leu Arg Gly Thr Tyr Met Gln His Ala Tyr Asp  
180 185 190

Phe Tyr Lys Pro Asp Leu Thr Ser Glu Tyr Pro Tyr Val Asp Gly His  
195 200 205

Phe Ser Leu Glu Cys Tyr Val Lys Ala Leu Asp Gly Ala Tyr Ala Asn  
210 215 220

Tyr Asn Val Arg Asp Val Ala Lys Asn Gly Lys Ser Gln Gly Leu Gly  
225 230 235 240

Leu Asp Arg Phe Asp Tyr Cys Ile Phe His Ala Pro Thr Cys Lys Gln  
245 250 255

Val Gln Lys Ala Tyr Ala Arg Leu Leu Tyr Thr Asp Ser Ala Ala Glu  
260 265 270

Pro Ser Asn Pro Glu Leu Glu Gly Val Arg Glu Leu Leu Ser Thr Leu  
275 280 285

Asp Ala Lys Lys Ser Leu Thr Asp Lys Ala Leu Glu Lys Gly Leu Met  
290 295 300

Ala Ile Thr Lys Glu Arg Phe Asn Lys Arg Val Ser Pro Ser Val Tyr  
305 310 315 320

Ala Pro Thr Asn Cys Gly Asn Met Tyr Thr Ala Ser Ile Phe Ser Cys  
325 330 335

Leu Thr Ala Leu Leu Ser Arg Val Pro Ala Asp Glu Leu Lys Gly Lys  
340 345 350

Arg Val Gly Ala Tyr Ser Tyr Gly Ser Gly Leu Ala Ala Ser Phe Phe  
355 360 365

Ser Phe Val Val Lys Gly Asp Val Ser Glu Ile Ala Lys Lys Thr Asn  
370 375 380

Leu Val Asn Asp Leu Asp Asn Arg His Cys Leu Thr Pro Thr Gln Tyr  
385 390 395 400

Glu Glu Ala Ile Glu Leu Arg His Gln Ala His Leu Lys Lys Asn Phe  
405 410 415

Thr Pro Lys Gly Ser Ile Glu Arg Leu Arg Ser Gly Thr Tyr Tyr Leu  
420 425 430

Thr Gly Ile Asp Asp Met Phe Arg Arg Ser Tyr Ser Val Lys Pro  
435 440 445

<210> 292  
<211> 520  
<212> PRT

<213> HUMAN

<400> 292

Met Pro Gly Ser Leu Pro Leu Asn Ala Glu Ala Cys Trp Pro Lys Asp  
1 5 10 15

Val Gly Ile Val Ala Leu Glu Ile Tyr Phe Pro Ser Gln Tyr Val Asp  
20 25 30

Gln Ala Glu Leu Glu Lys Tyr Asp Gly Val Asp Ala Gly Lys Tyr Thr  
35 40 45

Ile Gly Leu Gly Gln Ala Lys Met Gly Phe Cys Thr Asp Arg Glu Asp  
50 55 60

Ile Asn Ser Leu Cys Met Thr Val Val Gln Asn Leu Met Glu Arg Asn  
65 70 75 80

Asn Leu Ser Tyr Asp Cys Ile Gly Arg Leu Glu Val Gly Thr Glu Thr  
85 90 95

Ile Ile Asp Lys Ser Lys Ser Val Lys Thr Asn Leu Met Gln Leu Phe  
100 105 110

Glu Glu Ser Gly Asn Thr Asp Ile Glu Gly Ile Asp Thr Thr Asn Ala  
115 120 125

Cys Tyr Gly Gly Thr Ala Ala Val Phe Asn Ala Val Asn Trp Ile Glu  
130 135 140

Ser Ser Ser Trp Asp Gly Arg Tyr Ala Leu Val Val Ala Gly Asp Ile  
145 150 155 160

Ala Val Tyr Ala Thr Gly Asn Ala Arg Pro Thr Gly Gly Val Gly Ala  
165 170 175

Val Ala Leu Leu Ile Gly Pro Asn Ala Pro Leu Ile Phe Glu Arg Gly  
180 185 190

Leu Arg Gly Thr His Met Gln His Ala Tyr Asp Phe Tyr Lys Pro Asp  
195 200 205

Met Leu Ser Glu Tyr Pro Ile Val Asp Gly Lys Leu Ser Ile Gln Cys  
210 215 220

Tyr Leu Ser Ala Leu Asp Arg Cys Tyr Ser Val Tyr Cys Lys Lys Ile

225                    230                    235                    240

His Ala Gln Trp Gln Lys Glu Gly Asn Asp Lys Asp Phe Thr Leu Asn  
245                    250                    255

Asp Phe Gly Phe Met Ile Phe His Ser Pro Tyr Cys Lys Leu Val Gln  
260                    265                    270

Lys Ser Leu Ala Arg Met Leu Leu Asn Asp Phe Leu Asn Asp Gln Asn  
275                    280                    285

Arg Asp Lys Asn Ser Ile Tyr Ser Gly Leu Glu Ala Phe Gly Asp Val  
290                    295                    300

Lys Leu Glu Asp Thr Tyr Phe Asp Arg Asp Val Glu Lys Ala Phe Met  
305                    310                    320

Lys Ala Ser Ser Glu Leu Phe Ser Gln Lys Thr Lys Ala Ser Leu Leu  
325                    330                    335

Val Ser Asn Gln Asn Gly Asn Met Tyr Thr Ser Ser Val Tyr Gly Ser  
340                    345                    350

Leu Ala Ser Val Leu Ala Gln Tyr Ser Pro Gln Gln Leu Ala Gly Lys  
355                    360                    365

Arg Ile Gly Val Phe Ser Tyr Gly Ser Gly Leu Ala Ala Thr Leu Tyr  
370                    375                    380

Ser Leu Lys Val Thr Gln Asp Ala Thr Pro Gly Ser Ala Leu Asp Lys  
385                    390                    400

Ile Thr Ala Ser Leu Cys Asp Leu Lys Ser Arg Leu Asp Ser Arg Thr  
405                    410                    415

Gly Val Ala Pro Asp Val Phe Ala Glu Asn Met Lys Leu Arg Glu Asp  
420                    425                    430

Thr His His Leu Val Asn Tyr Ile Pro Gln Gly Ser Ile Asp Ser Leu  
435                    440                    445

Phe Glu Gly Thr Trp Tyr Leu Val Arg Val Asp Glu Lys His Arg Arg  
450                    455                    460

Thr Tyr Ala Arg Arg Pro Thr Pro Asn Asp Asp Thr Leu Asp Glu Gly  
465                    470                    475                    480

Val Gly Leu Val His Ser Asn Ile Ala Thr Glu His Ile Pro Ser Pro  
485 490 495

Ala Lys Lys Val Pro Arg Leu Pro Ala Thr Ala Ala Glu Pro Glu Ala  
500 505 510

Ala Val Ile Ser Asn Gly Glu His  
515 520

<210> 293  
<211> 163  
<212> PRT  
<213> Dictyostelium discoideum

<400> 293

Arg His Glu Asn Asp Tyr Ala Thr Lys Val Ala Pro Thr Thr Leu Leu  
1 5 10 15

Ala Lys Gln Leu Gly Asn Thr Tyr Cys Gly Ser Thr Tyr Ser Gly Leu  
20 25 30

Leu Ser Leu Leu Asp Glu Lys Ser Asn Asp Leu Val Gly Lys Arg Val  
35 40 45

Leu Thr Phe Ser Tyr Gly Ser Gly Leu Ala Ala Ser Ala Phe Ser Phe  
50 55 60

Lys Val Glu Lys Pro Ile Asn His Ile Val Glu Lys Val Asp Leu Lys  
65 70 75 80

Asn Arg Leu Ala Lys Arg Val Arg Val Glu Pro Glu Ile Phe Thr Glu  
85 90 95

Lys Leu Ser Leu Arg Glu Thr Arg His Asn Leu Lys Asn Tyr Val Pro  
100 105 110

Ser Asp Glu Thr Thr Asn Met Phe Pro Gly Ser Phe Tyr Leu Ser Ser  
115 120 125

Val Asp Lys Ala Gly Ile Arg Lys Phe Asp Arg Thr Tyr Ser Thr Ser  
130 135 140

Ala Val Leu Gly Ala Phe Gln Arg Arg Gln Gln Ile Ser His Gln Gln  
145 150 155 160

Ser Asn Leu

<210> 294  
<211> 458  
<212> PRT  
<213> Caenorhabditis elegans

<400> 294

Gln Leu Ser Tyr Thr Pro Val Thr Asp Val Gly Ile Gly Ala Ile Glu  
1 5 10 15

Leu Tyr Phe Pro Gln Asn Phe Val Asp Gln Asn Asp Leu Glu Lys Phe  
20 25 30

Asn Asn Val Ser Ser Gly Lys Tyr Thr Ile Gly Leu Gly Gln Gln Gln  
35 40 45

Met Gly Phe Cys Ser Asp Asn Glu Asp Ile Val Ser Ile Ser Leu Thr  
50 55 60

Val Thr Arg Lys Leu Ile Glu Thr Tyr Lys Ile Ser Thr Asp Ser Ile  
65 70 75 80

Gly Cys Leu Val Val Gly Thr Glu Thr Met Ile Asp Lys Ser Lys Ser  
85 90 95

Val Lys Thr Ala Leu Met Asp Leu Phe Pro Gly Asn Ser Asp Ile Glu  
100 105 110

Gly Val Asp Ile Lys Asn Ala Cys Phe Gly Gly Ala Gln Ala Leu Leu  
115 120 125

His Ala Ile Asp Trp Val Thr Val Asn His Pro Leu Asp Lys Lys Asn  
130 135 140

Ala Ile Val Val Ala Asp Ile Ala Ile Tyr Glu Glu Gly Pro Ala  
145 150 155 160

Arg Cys Thr Gly Gly Ala Gly Ala Ile Ala Phe Leu Ile Cys Pro Asp  
165 170 175

Ala Ser Ile Pro Ile Asp Arg Gln Phe Ser Ala Cys His Met Lys Asn  
180 185 190

Thr Trp Asp Phe Phe Lys Pro Ile Thr Pro Ile Pro Ser Glu Tyr Pro  
195 200 205

Val Val Asp Gly Ser Leu Ser Leu Ser Ser Tyr Leu Glu Ala Val Arg  
210 215 220

Met Thr Tyr Thr Tyr Phe Ile Ser Lys Val Asn Arg His Thr Thr Gly  
225 230 235 240

Ile Asp Gly Leu Asn Ser Phe Asp Gly Val Phe Leu His Ser Pro Phe  
245 250 255

Thr Lys Met Val Gln Lys Gly Leu Ala Val Met Asn Tyr Thr Asp Ser  
260 265 270

Gln Leu Arg His Lys Gln Leu Asn Gly Asn Gly Val Asp His Lys Leu  
275 280 285

Asp Glu Asn Asp Arg Ala Gly Leu Ala Lys Met Ile Glu Leu Ser Ala  
290 295 300

Gln Val Trp Lys Glu Lys Thr Asp Pro Tyr Leu Val Phe Asn Arg Arg  
305 310 315 320

Ile Gly Asn Met Tyr Thr Pro Ser Leu Phe Ala Gln Leu Leu Ala Tyr  
325 330 335

Leu Ala Ala Asp Asp Cys Val Thr Gly Glu Lys Ser Ile Leu Phe Phe  
340 345 350

Ala Tyr Gly Ser Gly Leu Ala Ser Ala Ile Phe Pro Gly Arg Val Arg  
355 360 365

Gln Thr Ser Asn Leu Asp Lys Ile Arg Gln Val Ala Ile Arg Ala Ile  
370 375 380

Lys Arg Leu Asp Asp Arg Ile Gln Phe Thr Pro Glu Glu Phe Thr Glu  
385 390 395 400

Thr Leu Gln Lys Arg Glu Val Phe Leu Arg Ser Lys Glu Ile Pro Lys  
405 410 415

Ser Pro Ser Glu Thr Ser Leu Phe Pro Asn Thr Tyr Phe Leu Asp Asn  
420 425 430

Met Asp Lys Leu Tyr Arg Arg Ser Tyr Thr Leu His Glu Glu Pro Asn  
435 440 445

Gly Val Gln Asn Gly Asn Gly Ile His His  
450 455

<210> 295  
<211> 461  
<212> PRT  
<213> Arabidopsis thaliana

<400> 295

Met Ala Lys Asn Val Gly Ile Leu Ala Met Asp Ile Tyr Phe Pro Pro  
1 5 10 15

Thr Cys Val Gln Gln Glu Ala Leu Glu Ala His Asp Gly Ala Ser Lys  
20 25 30

Gly Lys Tyr Thr Ile Gly Leu Gly Gln Asp Cys Leu Ala Phe Cys Thr  
35 40 45

Glu Leu Glu Asp Val Ile Ser Met Ser Phe Asn Ala Val Thr Ser Leu  
50 55 60

Phe Glu Lys Tyr Lys Ile Asp Pro Asn Gln Ile Gly Arg Leu Glu Val  
65 70 75 80

Gly Ser Glu Thr Val Ile Asp Lys Ser Lys Ser Ile Lys Thr Phe Leu  
85 90 95

Met Gln Leu Phe Glu Lys Cys Gly Asn Thr Asp Val Glu Gly Val Asp  
100 105 110

Ser Thr Asn Ala Cys Tyr Gly Gly Thr Ala Ala Leu Leu Asn Cys Val  
115 120 125

Asn Trp Val Glu Ser Asn Ser Trp Asp Gly Arg Tyr Gly Leu Val Ile  
130 135 140

Cys Thr Asp Ser Ala Val Tyr Ala Glu Gly Pro Ala Arg Pro Thr Gly  
145 150 155 160

Gly Ala Ala Ala Ile Ala Met Leu Ile Gly Pro Asp Ala Pro Ile Val  
165 170 175

Phe Glu Ser Lys Leu Arg Ala Ser His Met Ala His Val Tyr Asp Phe  
180 185 190

Tyr Lys Pro Asn Leu Ala Ser Glu Tyr Pro Val Val Asp Gly Lys Leu

195

200

205

Ser Gln Thr Cys Tyr Leu Met Ala Leu Asp Ser Cys Tyr Lys His Leu  
210 215 220

Cys Asn Lys Phe Glu Lys Ile Glu Gly Lys Glu Phe Ser Ile Asn Asp  
225 230 235 240

Ala Asp Tyr Ile Val Phe His Ser Pro Tyr Asn Lys Leu Val Gln Lys  
245 250 255

Ser Phe Ala Arg Leu Leu Tyr Asn Asp Phe Leu Arg Asn Ala Ser Ser  
260 265 270

Ile Asp Glu Ala Ala Lys Glu Lys Phe Thr Pro Tyr Ser Ser Leu Thr  
275 280 285

Leu Asp Glu Ser Tyr Gln Ser Arg Asp Leu Glu Lys Val Ser Gln Gln  
290 295 300

Ile Ser Lys Pro Phe Tyr Asp Ala Lys Val Gln Pro Thr Thr Leu Ile  
305 310 315 320

Pro Lys Glu Val Gly Asn Met Tyr Thr Ala Ser Leu Tyr Ala Ala Phe  
325 330 335

Ala Ser Leu Ile His Asn Lys His Asn Asp Leu Ala Gly Lys Arg Val  
340 345 350

Val Met Phe Ser Tyr Gly Ser Gly Ser Thr Ala Thr Met Phe Ser Leu  
355 360 365

Arg Leu Asn Asp Asn Lys Pro Pro Phe Ser Ile Ser Asn Ile Ala Ser  
370 375 380

Val Met Asp Val Gly Gly Lys Leu Lys Ala Arg His Glu Tyr Ala Pro  
385 390 395 400

Glu Lys Phe Val Glu Thr Met Lys Leu Met Glu His Arg Tyr Gly Ala  
405 410 415

Lys Asp Phe Val Thr Thr Lys Glu Gly Ile Ile Asp Leu Leu Ala Pro  
420 425 430

Gly Thr Tyr Tyr Leu Lys Glu Val Asp Ser Leu Tyr Arg Arg Phe Tyr  
435 440 445

Gly Lys Lys Gly Glu Asp Gly Ser Val Ala Asn Gly His  
450 455 460

<210> 296  
<211> 508  
<212> PRT  
<213> HUMAN

<400> 296

Met Gln Arg Leu Leu Thr Pro Val Lys Arg Ile Leu Gln Leu Thr Arg  
1 5 10 15

Ala Val Gln Glu Thr Ser Leu Thr Pro Ala Arg Leu Leu Pro Val Ala  
20 25 30

His Gln Arg Phe Ser Thr Ala Ser Ala Val Pro Leu Ala Lys Thr Asp  
35 40 45

Thr Trp Pro Lys Asp Val Gly Ile Leu Ala Leu Glu Val Tyr Phe Pro  
50 55 60

Ala Gln Tyr Val Asp Gln Thr Asp Leu Glu Lys Tyr Asn Asn Val Glu  
65 70 75 80

Ala Gly Lys Tyr Thr Val Gly Leu Gly Gln Thr Arg Met Gly Phe Cys  
85 90 95

Ser Val Gln Glu Asp Ile Asn Ser Leu Cys Leu Thr Val Val Gln Arg  
100 105 110

Leu Met Glu Arg Ile Gln Leu Pro Trp Asp Ser Val Gly Arg Leu Glu  
115 120 125

Val Gly Thr Glu Thr Ile Ile Asp Lys Ser Lys Ala Val Lys Thr Val  
130 135 140

Leu Met Glu Leu Phe Gln Asp Ser Gly Asn Thr Asp Ile Glu Gly Ile  
145 150 155 160

Asp Thr Thr Asn Ala Cys Tyr Gly Gly Thr Ala Ser Leu Phe Asn Ala  
165 170 175

Ala Asn Trp Met Glu Ser Ser Ser Trp Asp Gly Arg Tyr Ala Met Val  
180 185 190

Val Cys Gly Asp Ile Ala Val Tyr Pro Ser Gly Asn Ala Arg Pro Thr  
195 200 205

Gly Gly Ala Gly Ala Val Ala Met Leu Ile Gly Pro Lys Ala Pro Leu  
210 215 220

Ala Leu Glu Arg Gly Leu Arg Gly Thr His Met Glu Asn Val Tyr Asp  
225 230 235 240

Phe Tyr Lys Pro Asn Leu Ala Ser Glu Tyr Pro Ile Val Asp Gly Lys  
245 250 255

Leu Ser Ile Gln Cys Tyr Leu Arg Ala Leu Asp Arg Cys Tyr Thr Ser  
260 265 270

Tyr Arg Lys Lys Ile Gln Asn Gln Trp Lys Gln Ala Gly Ser Asp Arg  
275 280 285

Pro Phe Thr Leu Asp Asp Leu Gln Tyr Met Ile Phe His Thr Pro Phe  
290 295 300

Cys Lys Met Val Gln Lys Ser Leu Ala Arg Leu Met Phe Asn Asp Phe  
305 310 315 320

Leu Ser Ala Ser Ser Asp Thr Gln Thr Ser Leu Tyr Lys Gly Leu Glu  
325 330 335

Ala Phe Gly Gly Leu Lys Leu Glu Asp Thr Tyr Thr Asn Lys Asp Leu  
340 345 350

Asp Lys Ala Leu Leu Lys Ala Ser Gln Asp Met Phe Asp Lys Lys Thr  
355 360 365

Lys Ala Ser Leu Tyr Leu Ser Thr His Asn Gly Asn Met Tyr Thr Ser  
370 375 380

Ser Leu Tyr Gly Cys Leu Ala Ser Leu Leu Ser His His Ser Ala Gln  
385 390 395 400

Glu Leu Ala Gly Ser Arg Ile Gly Ala Phe Ser Tyr Gly Ser Gly Leu  
405 410 415

Ala Ala Ser Phe Phe Ser Phe Arg Val Ser Gln Asp Ala Ala Pro Gly  
420 425 430

Ser Pro Leu Asp Lys Leu Val Ser Ser Thr Ser Asp Leu Pro Lys Arg

435

440

445

Leu Ala Ser Arg Lys Cys Val Ser Pro Glu Glu Phe Thr Glu Ile Met  
450 455 460

Asn Gln Arg Glu Gln Phe Tyr His Lys Val Asn Phe Ser Pro Pro Gly  
465 470 475 480

Asp Thr Asn Ser Leu Phe Pro Gly Thr Trp Tyr Leu Glu Arg Val Asp  
485 490 495

Glu Gln His Arg Arg Lys Tyr Ala Arg Arg Pro Val  
500 505

<210> 297  
<211> 455  
<212> PRT  
<213> Blattella germanica

<400> 297

Met Ala His Trp Pro Glu Asp Val Gly Ile Ile Gly Ile Glu Met Ile  
1 5 10 15

Phe Pro Ser Leu Tyr Val Asp Gln Ala Glu Leu Glu Thr Tyr Asp Glu  
20 25 30

Val Ser Pro Gly Lys Tyr Thr Met Gly Leu Gly Gln Asp Lys Met Gly  
35 40 45

Val Cys Thr Asp Arg Glu Asp Ile Asn Ser Leu Cys Leu Thr Ala Val  
50 55 60

Asp Lys Leu Met Glu Arg Asn Asn Ile Asp Tyr Asn Asp Ile Gly Trp  
65 70 75 80

Leu Glu Val Gly Thr Glu Thr Ile Leu Asp Lys Val Lys Ser Val Lys  
85 90 95

Thr Val Leu Met Gln Leu Phe Glu Glu Ser Gly Asn Thr Asp Val Glu  
100 105 110

Gly Ile Asp Thr Ile Asn Ala Cys Tyr Arg Gly Thr Ala Ala Leu Phe  
115 120 125

Asn Ala Leu Ile Trp Ile Glu Ser Ser Ser Trp Asp Gly Arg Tyr Ala  
130 135 140

Ile Val Val Ala Ala Asp Ile Ala Ile Tyr Ala Lys Glu Cys Ser Pro  
145 150 155 160

Thr Gly Gly Ala Gly Ala Leu Leu Met Leu Ile Gly Ala Asn Ala Pro  
165 170 175

Ile Val Ile Asp Arg Gly Val Arg Ala Ser His Met Lys His Ala Tyr  
180 185 190

Asp Phe Tyr Lys Pro Asp Leu Met Ser Glu Tyr Pro Val Val Asp Gly  
195 200 205

Lys Leu Ser Val Gln Cys Tyr Leu Ser Ala Leu Asp His Cys Tyr Pro  
210 215 220

Arg Phe Cys Ser Lys Thr Glu Lys Tyr Leu Lys Arg Cys Gly Lys Glu  
225 230 235 240

Asn Thr Lys Ile Asp Leu Asp Tyr Phe Asp Ala Phe Val Phe His Ser  
245 250 255

Pro Tyr Cys Lys Leu Val Gln Lys Ser Val Ala Arg Leu Val Leu Asn  
260 265 270

Asp Phe Ile Gln Tyr Pro Glu Lys Tyr Gln Asp Leu Gln Gln Leu Arg  
275 280 285

Asn Leu Lys Phe Glu Asp Thr Tyr Phe Asp Arg Asp Ile Glu Lys Ile  
290 295 300

Phe Met Asp Lys Ser Lys Gln Leu Phe Glu Lys Lys Thr Lys Pro Ser  
305 310 315 320

Leu Met Leu Ala Asn Gln Val Gly Asn Met Tyr Thr Thr Ser Leu Tyr  
325 330 335

Gly Gly Leu Val Ser Leu Ile Ser Glu Asp Ile Gly Glu Leu Ala  
340 345 350

Gly Lys Cys Ile Cys Met Phe Ser Tyr Gly Ser Gly Phe Ala Ala Ser  
355 360 365

Met Phe Ser Leu His Ile Ser Thr Asp Ser Ser Pro Gly Ser Thr Leu  
370 375 380

Ser Arg Leu Val Thr Asn Leu Thr His Ile Lys Pro Gln Val Gln Gln  
385 390 395 400

Arg Val Lys Leu Ser Pro Gly Glu Phe Glu Asn Ile Met Glu Ile Arg  
405 410 415

Glu Gln Asn His His Lys Ala Pro Tyr Thr Pro Val Ala Ser Pro Asn  
420 425 430

Thr Leu Phe Pro Gly Thr Trp Tyr Leu Glu Ser Ile Asp Ser Met His  
435 440 445

Arg Arg Lys Tyr Lys Arg Val  
450 455

<210> 298  
<211> 453  
<212> PRT  
<213> Blattella germanica

<400> 298

Met Trp Pro Ser Asp Val Gly Ile Val Ala Leu Glu Leu Ile Phe Pro  
1 5 10 15

Ser Gln Tyr Val Asp Gln Val Asp Leu Glu Val Tyr Asp Asn Val Ser  
20 25 30

Ala Gly Lys Tyr Thr Val Gly Leu Gly Gln Ala Arg Met Gly Phe Cys  
35 40 45

Thr Asp Arg Glu Asp Ile Asn Ser Leu Cys Leu Thr Val Val Ser Arg  
50 55 60

Leu Met Glu Arg Trp Ser Ile Pro Tyr Ser Gln Ile Gly Arg Leu Glu  
65 70 75 80

Val Gly Thr Glu Thr Leu Leu Asp Lys Ser Lys Ser Val Lys Thr Val  
85 90 95

Leu Met Gln Leu Phe Lys Asp Asn Thr Asp Ile Glu Gly Val Asp Thr  
100 105 110

Val Asn Ala Cys Tyr Gly Gly Thr Ser Ala Leu Phe Asn Ala Ile Ser  
115 120 125

Trp Val Glu Ser Ser Ser Trp Asp Gly Arg Tyr Ala Leu Val Val Ala  
130 135 140

Gly Asp Ile Ala Val Tyr Ala Lys Gly Ser Ala Arg Pro Thr Gly Gly  
145 150 155 160

Ala Gly Ala Val Ala Met Leu Val Gly Ala Asn Ala Pro Leu Val Phe  
165 170 175

Asp Arg Gly Val Arg Ser Ser His Met Gln His Ala Tyr Asp Phe Tyr  
180 185 190

Lys Pro Asp Leu Ser Ser Leu Tyr Pro Thr Val Asp Gly Lys Leu Ser  
195 200 205

Ile Gln Cys Tyr Leu Ser Ala Leu Asp His Cys Tyr Gln Leu Tyr Cys  
210 215 220

Ser Lys Ile Gln Lys Gln Leu Gly Glu Lys Phe Asp Ile Glu Arg Leu  
225 230 235 240

Asp Ala Val Leu Phe His Ala Pro Tyr Cys Lys Leu Val Gln Lys Ser  
245 250 255

Leu Ala Arg Leu Val Leu Asn Asp Phe Val Arg Ala Ser Glu Glu Glu  
260 265 270

Arg Thr Thr Lys Tyr Ser Ser Leu Glu Ala Leu Lys Gly Val Lys Leu  
275 280 285

Glu Asp Thr Tyr Phe Asp Arg Glu Val Glu Lys Ala Val Met Thr Tyr  
290 295 300

Ser Lys Asn Met Phe Glu Glu Lys Thr Lys Pro Ser Leu Leu Leu Ala  
305 310 315 320

Asn Gln Val Gly Asn Met Tyr Thr Pro Ser Leu Tyr Gly Gly Leu Val  
325 330 335

Ser Leu Leu Val Ser Lys Ser Ala Gln Glu Leu Ala Gly Lys Arg Val  
340 345 350

Ala Leu Phe Ser Tyr Gly Ser Gly Leu Ala Ser Ser Met Phe Ser Leu  
355 360 365

Arg Ile Ser Ser Asp Ala Ser Ala Lys Ser Ser Leu Gln Arg Leu Val  
370 375 380

Ser Asn Leu Ser His Ile Lys Pro Gln Leu Asp Leu Arg His Lys Val  
385 390 395 400

Ser Pro Glu Glu Phe Ala Gln Thr Met Glu Thr Arg Glu His Asn His  
405 410 415

His Lys Ala Pro Tyr Thr Pro Glu Gly Ser Ile Asp Val Leu Phe Pro  
420 425 430

Gly Thr Trp Tyr Leu Glu Ser Val Asp Ser Leu Tyr Arg Arg Ser Tyr  
435 440 445

Lys Gln Val Pro Gly  
450

<210> 299  
<211> 593  
<212> PRT  
<213> Camptotheca acuminata

<400> 299

Met Asp Val Arg Arg Arg Ser Ile Asn Ser Ile His Gln Ile Pro Ser  
1 5 10 15

Val Gly Gly Thr Ala Pro Pro Met Leu Lys Pro Lys Gln Pro Thr Lys  
20 25 30

Val Asp Ala Val Asp Leu Pro Asp Ser Pro Lys Ala Ser Asp Ala Leu  
35 40 45

Pro Leu Pro Leu Tyr Ile Thr Asn Gly Val Phe Phe Thr Leu Phe Phe  
50 55 60

Thr Val Val Tyr Tyr Leu Leu Val Arg Trp Arg Glu Lys Ile Arg Asn  
65 70 75 80

Ser Thr Pro Leu His Val Val Thr Leu Ser Glu Ile Ala Ala Ile Phe  
85 90 95

Thr Phe Val Ala Ser Phe Ile Tyr Leu Leu Gly Phe Phe Gly Ile Gly  
100 105 110

Leu Val Gln Pro Phe Thr Ser Arg Ser Ser His Asp Asp Val Trp Gly  
115 120 125

Val Asp Asp Asp Glu Asp Val Asp Glu Ile Val Leu Lys Glu Asp Thr

130                    135                    140

Arg Thr Val Pro Cys Ala Ala Ala Pro Val Asp Cys Pro Leu Pro Pro  
145                    150                    155                    160

Ile Lys Pro Lys Val Val Asp Pro Val Pro Ile Ser Pro Pro Ser Ser  
165                    170                    175

Glu Glu Asp Glu Glu Ile Ile Lys Ser Val Val Glu Gly Thr Thr Pro  
180                    185                    190

Ser Tyr Ala Leu Glu Ser Lys Leu Gly Asp Ser His Arg Ala Ala Ala  
195                    200                    205

Ile Arg Arg Glu Ala Leu Gln Arg Met Thr Lys Lys Ser Leu Ala Gly  
210                    215                    220

Leu Pro Leu Asp Gly Phe Asp Tyr Asp Ser Ile Leu Gly Gln Cys Cys  
225                    230                    235                    240

Glu Met Pro Val Gly Tyr Val Gln Ile Pro Val Gly Ile Ala Gly Pro  
245                    250                    255

Leu Leu Leu Asp Gly Arg Glu Tyr Ser Val Pro Met Ala Thr Thr Glu  
260                    265                    270

Gly Cys Leu Val Ala Ser Thr Asn Arg Gly Cys Lys Ala Ile Phe Ala  
275                    280                    285

Cys Gly Gly Ala Thr Ser Val Leu Leu Arg Asp Ala Met Thr Arg Ala  
290                    295                    300

Pro Val Val Arg Phe Gly Ser Ala Lys Arg Ala Ala Asp Leu Lys Phe  
305                    310                    315                    320

Phe Leu Glu Asn Pro Leu Asn Phe Glu Thr Leu Ala Ala Val Phe Asn  
325                    330                    335

Ser Ser Ser Arg Phe Gly Lys Leu Gln Asn Ile Lys Cys Ala Ile Ala  
340                    345                    350

Gly Lys Asn Leu Tyr Met Arg Tyr Ser Cys Ser Thr Gly Asp Ala Met  
355                    360                    365

Gly Met Asn Met Ile Ser Lys Gly Val Gln Asn Val Leu Asp Phe Leu  
370                    375                    380

Gln Asp Asp Phe Pro Asp Met Asp Val Ile Gly Ile Ser Gly Asn Tyr  
385                   390                   395                   400

Cys Ser Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly  
405                   410                   415

Lys Ser Val Val Cys Glu Ala Val Ile Lys Glu Glu Val Val Lys Lys  
420                   425                   430

Val Leu Lys Thr Asn Val Ala Ser Leu Val Glu Leu Asn Met Leu Lys  
435                   440                   445

Asn Leu Thr Gly Ser Ala Met Ala Gly Ala Leu Gly Gly Phe Asn Ala  
450                   455                   460

His Ala Ser Asn Ile Val Ser Ala Val Tyr Leu Ala Thr Gly Gln Asp  
465                   470                   475                   480

Pro Ala Gln Asn Val Glu Ser Ser His Cys Ile Thr Met Met Glu Ala  
485                   490                   495

Ile Asn Asp Gly Lys Asp Leu His Val Ser Val Thr Met Pro Ser Ile  
500                   505                   510

Glu Val Gly Thr Val Gly Gly Thr Gln Leu Ala Ser Gln Ser Ala  
515                   520                   525

Cys Leu Asn Leu Leu Gly Val Lys Gly Ala Ser Lys Glu Ala Pro Gly  
530                   535                   540

Ser Asn Ala Arg Leu Leu Ala Thr Ile Val Ala Gly Ser Val Leu Ala  
545                   550                   555                   560

Gly Glu Leu Ser Leu Met Ser Ala Ile Ala Ala Gly Gln Leu Val Asn  
565                   570                   575

Ser His Met Lys Tyr Asn Arg Ser Asn Lys Asp Val Thr Lys Ala Ser  
580                   585                   590

Ser

<210> 300  
<211> 602  
<212> PRT

<213> Lycopersicon esculentum

<400> 300

Met Asp Val Arg Arg Arg Ser Glu Glu Pro Val Tyr Pro Ser Lys Val  
1 5 10 15

Phe Ala Ala Asp Glu Lys Pro Leu Lys Pro His Lys Lys Gln Gln Gln  
20 25 30

Gln Gln Glu Asp Lys Asn Thr Leu Leu Ile Asp Ala Ser Asp Ala Leu  
35 40 45

Pro Leu Pro Leu Tyr Leu Thr Thr Asn Gly Leu Phe Phe Thr Met Phe  
50 55 60

Phe Ser Val Met Tyr Phe Leu Leu Ser Arg Trp Arg Glu Lys Ile Arg  
65 70 75 80

Asn Ser Thr Pro Leu His Val Val Thr Leu Ser Glu Leu Gly Ala Ile  
85 90 95

Val Ser Leu Ile Ala Ser Val Ile Tyr Leu Leu Gly Phe Phe Gly Ile  
100 105 110

Gly Phe Val Gln Thr Phe Val Ser Arg Gly Asn Asn Asp Ser Trp Asp  
115 120 125

Glu Asn Asp Glu Glu Phe Leu Leu Lys Glu Asp Ser Arg Cys Gly Pro  
130 135 140

Ala Thr Thr Leu Gly Cys Ala Val Pro Ala Pro Pro Ala Arg Gln Ile  
145 150 155 160

Ala Pro Met Ala Pro Pro Gln Pro Ser Met Ser Met Val Glu Lys Pro  
165 170 175

Ala Pro Leu Ile Thr Ser Ala Ser Ser Gly Glu Asp Glu Glu Ile Ile  
180 185 190

Lys Ser Val Val Gln Gly Lys Ile Pro Ser Tyr Ser Leu Glu Ser Lys  
195 200 205

Leu Gly Asp Cys Lys Arg Ala Ala Ser Ile Arg Lys Glu Val Met Gln  
210 215 220

Arg Ile Thr Gly Lys Ser Leu Glu Gly Leu Pro Leu Glu Gly Phe Asn

225                    230                    235                    240

Tyr Glu Ser Ile Leu Gly Gln Cys Cys Glu Met Pro Ile Gly Tyr Val  
245                    250                    255

Gln Ile Pro Val Gly Ile Ala Gly Pro Leu Leu Leu Asn Gly Lys Glu  
260                    265                    270

Phe Ser Val Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr  
275                    280                    285

Asn Arg Gly Cys Lys Ala Ile Tyr Ala Ser Gly Gly Ala Thr Cys Ile  
290                    295                    300

Leu Leu Arg Asp Gly Met Thr Arg Ala Pro Cys Val Arg Phe Gly Thr  
305                    310                    315                    320

Ala Lys Arg Ala Ala Glu Leu Lys Phe Phe Val Glu Asp Pro Ile Lys  
325                    330                    335

Phe Glu Ser Leu Ala Asn Val Phe Asn Gln Ser Ser Arg Phe Ala Arg  
340                    345                    350

Leu Gln Arg Ile Gln Cys Ala Ile Ala Gly Lys Asn Leu Tyr Met Arg  
355                    360                    365

Leu Cys Cys Ser Thr Gly Asp Ala Met Gly Met Asn Met Val Ser Lys  
370                    375                    380

Gly Val Gln Asn Val Leu Asp Tyr Leu Gln Asn Glu Tyr Pro Asp Met  
385                    390                    395                    400

Asp Val Ile Gly Ile Ser Gly Asn Phe Cys Ser Asp Lys Lys Pro Ala  
405                    410                    415

Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala  
420                    425                    430

Ile Ile Thr Glu Glu Val Val Lys Lys Val Leu Lys Thr Glu Val Ala  
435                    440                    445

Ala Leu Val Glu Leu Asn Met Leu Lys Asn Leu Thr Gly Ser Ala Met  
450                    455                    460

Ala Gly Ala Leu Gly Gly Phe Asn Ala His Ala Ser Asn Ile Val Ser  
465                    470                    475                    480

Ala Val Phe Ile Ala Thr Gly Gln Asp Pro Ala Gln Asn Ile Glu Ser  
485 490 495

Ser His Cys Ile Thr Met Met Glu Ala Val Asn Asp Gly Lys Asp Leu  
500 505 510

His Ile Ser Val Thr Met Pro Ser Ile Glu Val Gly Thr Val Gly Gly  
515 520 525

Gly Thr Gln Leu Ala Ser Gln Ser Ala Cys Leu Asn Leu Leu Gly Val  
530 535 540

Lys Gly Ala Asn Arg Glu Ala Pro Gly Ser Asn Ala Arg Leu Leu Ala  
545 550 560

Thr Val Val Ala Gly Ser Val Leu Ala Gly Glu Leu Ser Leu Met Ser  
565 570 575

Ala Ile Ser Ser Gly Gln Leu Val Asn Ser His Met Lys Tyr Asn Arg  
580 585 590

Ser Thr Lys Asp Val Thr Lys Ala Ser Ser  
595 600

<210> 301  
<211> 481  
<212> PRT  
<213> Dictyostelium discoideum  
  
<400> 301

Lys Gly Lys Ser Val Asn Val Glu Asp Leu Lys Asp Gln Glu Ile Ile  
1 5 10 15

Ala Leu Val Asp Lys Gly Glu Ile Gln Pro His Asn Leu Glu Thr Arg  
20 25 30

Leu Pro Asn Asn Phe Gln Arg Ala Val His Ile Arg Arg Lys Leu Leu  
35 40 45

Ala Arg Asp Leu Gln Lys Glu His Gln Arg Ala Leu His Ala Gln Ala  
50 55 60

Val Val Ala Ala Ala Glu Lys Ala Ala Thr Ser Gly Glu Asp Pro Ser  
65 70 75 80

Ser Ile Gln Pro Val Val Pro Pro Thr Ser Asn Leu Asp Phe Glu Gly  
85 90 95

Ser Leu Thr Asn Leu Pro Val Asp His Phe Asp Tyr Thr Lys Val Leu  
100 105 110

Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr Ile Pro Ile Pro Val Gly  
115 120 125

Val Ala Gly Pro Ile Leu Leu Asp Gly Lys Leu Val Ser Ile Pro Met  
130 135 140

Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr His Arg Gly Ala Lys  
145 150 155 160

Ala Ile Thr Lys Ser Gly Gly Ala Lys Thr Val Leu Leu Gln Ser Gly  
165 170 175

Met Thr Arg Ala Pro Val Cys Arg Leu Pro Ser Ser Ile Arg Ala Gly  
180 185 190

Glu Leu Lys Gln Trp Ile Glu Asn Gln Glu Asn Phe Tyr Gln Val Ala  
195 200 205

Ser Ala Phe Asn Ser Thr Ser Arg Phe Ala Arg Leu Lys Ser Ile Lys  
210 215 220

Val Val Ile Ala Gly Arg Leu Val Tyr Leu Arg Phe Lys Ser Ser Thr  
225 230 235 240

Gly Asp Ala Met Gly Met Asn Met Val Ser Lys Gly Val Glu Lys Ala  
245 250 255

Leu Glu Val Ile Thr Glu Tyr Phe Pro Glu Met Glu Val Leu Ser Leu  
260 265 270

Ser Gly Asn Val Cys Thr Asp Lys Lys Pro Ser Ser Ile Asn Trp Leu  
275 280 285

Glu Gly Arg Gly Lys Ser Val Val Ala Glu Ala Val Ile Ser Gly Asp  
290 295 300

Ile Val Arg Asp Val Leu Lys Thr Thr Val Glu Ala Leu Val Ser Leu  
305 310 315 320

Asn Ile Asp Lys Asn Leu Ile Gly Ser Ala Met Ala Gly Ser Ile Gly

325

330

335

Gly Phe Asn Ala His Ala Ser Asn Ile Val Thr Ala Leu Tyr Ile Ala  
340 345 350

Thr Gly Gln Asp Pro Ala Gln Asn Val Glu Ser Ser Asn Cys Ile Thr  
355 360 365

Leu Met Glu Ser Ile Asn Gly Gly Lys Asp Leu Tyr Ile Ser Val Thr  
370 375 380

Met Pro Ser Ile Glu Val Gly Thr Val Gly Gly Thr His Leu Pro  
385 390 395 400

Ala Gln Ser Ala Cys Leu Asp Leu Leu Lys Ile Arg Gly Ala Asn Leu  
405 410 415

Glu Arg Pro Gly Ala Asn Ser Glu Gln Leu Ala Arg Val Val Ala Ala  
420 425 430

Ala Val Leu Ser Gly Glu Leu Ser Leu Met Ser Ala Leu Ala Ala Gly  
435 440 445

His Leu Val Arg Ser His Leu Lys His Asn Arg Lys Thr Glu Ala Pro  
450 455 460

Ala Pro Gln Ala Asp Thr Ile Ser Met Thr His Asn Leu Pro His Ser  
465 470 475 480

Asp

<210> 302  
<211> 552  
<212> PRT  
<213> Dictyostelium discoideum

<400> 302

Met Leu Phe Ala Pro Pro Asn Leu Glu Thr Lys Glu Leu Phe Trp Ile  
1 5 10 15

Ile Tyr Ile Leu Ile Leu Ile Pro Lys Val Phe Ala Lys Val Met Ser  
20 25 30

Val Arg Glu Leu Phe Pro Phe Phe Lys Trp Gly Phe Asn Ile Arg Arg  
35 40 45

Ser Asn Phe Leu Val Pro Ile Leu Ser Asn Asn Val Ile Val Thr Gly  
50 55 60

Glu Glu Ala Val Gln Tyr Glu Lys Pro Leu Pro Tyr Ile Pro Gln His  
65 70 75 80

Asn Gln Gln Gln Gln Lys Gln Gln Pro Ser Gln Asp Tyr Ile Gln  
85 90 95

Gln Pro Gln Asn Asp Asn Asn Ile Asn Ser Gly Lys Glu Gln Glu Gln  
100 105 110

Gln Gln Gln Gln Gln Gln Gln Gln Gln Thr Pro Asp Ile Thr Asn  
115 120 125

Gln Pro Thr Lys Thr Asn Lys Lys Ile Pro Ile Lys Glu Leu Ser Asn  
130 135 140

Glu Glu Ile Leu Ile Lys Leu Glu Lys Gly Glu Val Leu Ala Tyr Arg  
145 150 155 160

Leu Glu Asn Glu Leu Gly Asp Cys Ser Arg Ala Val Glu Ile Arg Arg  
165 170 175

Met Leu Leu Glu Lys Gln Leu Ser Lys Lys Ile Glu Pro Ile Pro His  
180 185 190

Glu Gly Phe Asp Phe Ala Lys Val Gln Gly Gln Cys Cys Glu Asn Val  
195 200 205

Ile Gly Tyr Val Pro Ile Pro Val Gly Thr Ala Gly Pro Ile Gln Leu  
210 215 220

Asn Gly Gln Leu Val Thr Ile Pro Met Ala Thr Thr Glu Gly Cys Leu  
225 230 235 240

Val Ala Ser Thr His Arg Gly Cys Lys Ala Ile Thr Glu Ser Gly Gly  
245 250 255

Ala Lys Cys Thr Ile Thr Ser Arg Gly Met Thr Arg Ala Pro Val Val  
260 265 270

Arg Phe Ser Asp Ile Val Lys Ala Ser Glu Phe Val Ser Trp Ile Asn  
275 280 285

Asp Thr Asp Asn Tyr Gln Ala Leu Lys Ala Val Phe Asp Ser Thr Ser  
290 295 300

Arg Phe Ala Arg Leu Ser Ala Ile Lys Cys Thr Ile Ala Gly Arg Ser  
305 310 315 320

Val Tyr Ile Arg Phe Lys Cys Asp Thr Gly Asp Ala Met Gly Met Asn  
325 330 335

Met Val Ser Lys Gly Val Glu Ala Val Leu Glu His Leu Lys Ile Ile  
340 345 350

Phe Asp Asp Met Thr Leu Leu Ser Ile Ser Gly Asn Met Cys Thr Asp  
355 360 365

Lys Lys Pro Ser Ser Ile Asn Trp Thr Glu Gly Arg Gly Arg Ser Val  
370 375 380

Val Cys Glu Ala Met Ile Thr Gly Asp Val Val Gln Arg Val Leu Lys  
385 390 395 400

Thr Asn Val Gln Ala Leu Val Asp Leu Asn Ile Ala Lys Asn Leu Ile  
405 410 415

Gly Ser Ala Met Ala Gly Ser Ile Gly Gly Phe Asn Ala His Ala Ser  
420 425 430

Asn Ile Val Thr Ala Ile Phe Leu Ala Thr Gly Gln Asp Cys Ala Gln  
435 440 445

Asn Val Glu Ser Ser Asn Cys Ile Thr Gln Met Glu Ala Cys Asn Asp  
450 455 460

Gly Gln Asp Leu Tyr Ile Thr Val Thr Met Pro Ser Ile Glu Val Gly  
465 470 475 480

Thr Val Gly Gly Thr Ser Leu Pro Ala Gln Ser Ala Cys Leu Asp  
485 490 495

Ile Ile Gly Val Lys Gly Ser Ser Ser Lys Pro Gly Ala Asn Ala  
500 505 510

Asp Gln Leu Ala Lys Thr Ile Ala Ser Ala Val Met Ala Gly Glu Leu  
515 520 525

Ser Leu Met Ser Ala Leu Ser Ala Gly His Leu Met Lys Ser His Leu

530

535

540

Gln Tyr Asn Arg Ala Lys Thr Asn  
545 550

<210> 303  
<211> 224  
<212> PRT  
<213> Mus musculus

<400> 303

Glu Lys Ala Leu Leu Lys Leu Gln Glu Phe Phe Pro Asp Met Gln Ile  
1 5 10 15

Leu Ala Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys Pro Ala Ala Ile  
20 25 30

Asn Trp Ile Glu Gly Arg Gly Lys Thr Val Val Cys Glu Ala Val Ile  
35 40 45

Pro Ala Lys Val Val Arg Glu Val Leu Lys Thr Thr Thr Glu Ala Met  
50 55 60

Val Asp Val Asn Ile Asn Lys Asn Leu Val Gly Ser Ala Met Ala Gly  
65 70 75 80

Ser Ile Gly Gly Tyr Asn Ala His Ala Ala Asn Ile Val Thr Ala Ile  
85 90 95

Tyr Ile Ala Cys Gly Gln Asp Ala Ala Gln Asn Val Gly Ser Ser Asn  
100 105 110

Cys Ile Thr Leu Met Glu Ala Ser Gly Pro Thr Asn Glu Asp Leu Tyr  
115 120 125

Ile Ser Cys Thr Met Pro Ser Ile Glu Ile Gly Thr Val Gly Gly Gly  
130 135 140

Thr Asn Leu Leu Pro Gln Gln Ala Cys Leu Gln Met Leu Gly Val Gln  
145 150 155 160

Gly Ala Cys Lys Asp Asn Pro Gly Glu Asn Ala Arg Gln Leu Ala Arg  
165 170 175

Ile Val Cys Gly Thr Val Met Ala Gly Glu Leu Ser Leu Met Ala Ala  
180 185 190

Leu Ala Ala Gly His Leu Val Arg Ser His Met Val His Asn Arg Ser  
195 200 205

Lys Ile Asn Leu Gln Asp Leu Gln Gly Thr Cys Thr Lys Lys Ala Ala  
210 215 220

<210> 304  
<211> 883  
<212> PRT  
<213> Xenopus laevis

<400> 304

Met Leu Ser Arg Leu Phe Arg Met His Gly Gln Phe Val Ala Ser His  
1 5 10 15

Pro Trp Glu Val Ile Val Gly Thr Val Thr Leu Thr Ile Cys Met Met  
20 25 30

Ser Met Asn Met Phe Thr Gly Asn Asp Lys Ile Cys Gly Trp Asn Tyr  
35 40 45

Ala Cys Pro Lys Phe Glu Glu Asp Val Leu Ser Ser Asp Ile Ile Ile  
50 55 60

Leu Thr Ile Thr Arg Cys Ile Ala Ile Leu Tyr Ile Tyr Phe Gln Phe  
65 70 75 80

Gln Asn Leu Arg Gln Leu Gly Ser Lys Tyr Ile Leu Gly Ile Ala Gly  
85 90 95

Leu Phe Thr Ile Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His  
100 105 110

Phe Leu Asp Lys Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe  
115 120 125

Leu Leu Leu Ile Asp Leu Ser Lys Ala Ser Ala Leu Ala Lys Phe Ala  
130 135 140

Leu Ser Ser Asn Ser Gln Asp Glu Val Arg Asp Asn Ile Ala Arg Gly  
145 150 155 160

Met Ala Ile Leu Gly Pro Thr Phe Thr Leu Glu Ala Leu Val Glu Cys  
165 170 175

Leu Val Ile Gly Val Gly Thr Met Ser Gly Val Arg Gln Leu Glu Ile

180

185

190

Met Cys Cys Phe Gly Cys Met Ser Val Leu Ala Asn Tyr Phe Ala Phe  
195 200 205

Met Thr Phe Phe Pro Ala Cys Val Ser Leu Val Leu Glu Leu Ser Arg  
210 215 220

Glu Ser Arg Glu Gly Arg Pro Ile Trp Gln Leu Ser Gln Phe Ala Ser  
225 230 235 240

Val Leu Glu Glu Glu Asp Asn Lys Pro Asn Pro Val Thr Gln Arg  
245 250 255

Val Lys Met Ile Met Ser Leu Gly Leu Val Leu Val His Ala His Ser  
260 265 270

Arg Trp Ile Ser Glu Pro Ser Ser Gln Asn Ser Thr Ser Ile Ser Asp  
275 280 285

His Glu Val Thr Thr Met Leu Asp Asp Met Met Pro Lys Arg Val Glu  
290 295 300

Pro Ser Met Pro Leu Trp Gln Phe Tyr Leu Ser Arg Met Val Thr Met  
305 310 315 320

Asp Val Glu Gln Ile Ile Thr Leu Gly Leu Ala Leu Leu Leu Ala Val  
325 330 335

Lys Tyr Ile Phe Phe Glu Gln Thr Glu Thr Glu Ser Thr Phe Ser Met  
340 345 350

Lys Asn Pro Ile Ile Ser Pro Val Ala Val Gln Lys Lys Gln Ile Glu  
355 360 365

Ser Cys Cys Arg Arg Glu Pro Glu Gln Glu Lys Thr Val His Val Ser  
370 375 380

Thr Thr Glu Glu Ala Ser Ser Lys Glu Glu Thr Glu Ala Val Ile Lys  
385 390 395 400

Pro Leu Pro Leu Glu Thr Ser Pro Lys Ala Lys Phe Ile Val Gly Asp  
405 410 415

Ser Ser Pro Leu Glu Leu Ser Pro Glu Asp Lys Asn Thr Met Phe Asp  
420 425 430

Leu Pro Glu Glu Pro Arg Pro Leu Asp Glu Cys Val Arg Ile Leu Lys  
435 440 445

Asn Pro Asp Lys Gly Ala Gln Tyr Leu Thr Asp Ala Glu Val Ile Ser  
450 455 460

Leu Val Asn Ala Lys His Ile Pro Ala Tyr Lys Leu Glu Thr Met Met  
465 470 475 480

Glu Ser Pro Arg Glu Gly Val Ala Ile Arg Arg Gln Met Leu Ser Asp  
485 490 495

Lys Leu Pro Gln Arg Ser Ala Leu Gln Ser Leu Pro Tyr Lys Asn Tyr  
500 505 510

Asn Tyr Ser Leu Val Met Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr  
515 520 525

Met Pro Ile Pro Val Gly Val Ala Gly Pro Leu Leu Leu Asn Asn Lys  
530 535 540

Glu Tyr Gln Val Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser  
545 550 555 560

Thr Asn Arg Gly Cys Arg Ala Ile Met Leu Gly Gly Ala Lys Ser  
565 570 575

Arg Val Leu Ala Asp Gly Met Thr Arg Gly Pro Val Val Arg Leu Pro  
580 585 590

Thr Ala Cys Asp Ala Ala Glu Val Lys Ala Trp Leu Asp Ser Ala Glu  
595 600 605

Gly Phe Lys Val Ile Lys Asp Ala Phe Asp Ser Thr Ser Arg Phe Ala  
610 615 620

Arg Leu Gly Arg Leu Gln Asn Cys Val Ala Gly Arg Asn Leu Tyr Ile  
625 630 635 640

Arg Phe Gln Ser Lys Thr Gly Asp Ala Met Gly Met Asn Met Ile Ser  
645 650 655

Lys Val Thr Glu Gln Ala Leu Ala Arg Leu Gln Glu Glu Phe Pro Asp  
660 665 670

Leu His Val Leu Ala Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys Pro  
675 680 685

Ala Ala Ile Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu  
690 695 700

Ala Ile Ile Pro Ala Lys Val Val Arg Glu Val Leu Lys Ser Ser Thr  
705 710 715 720

Glu Ala Leu Val Glu Val Asn Ile Asn Lys Asn Phe Ile Gly Ser Ala  
725 730 735

Met Ala Gly Ser Ile Gly Gly Tyr Asn Ala His Ala Ala Asn Ile Val  
740 745 750

Thr Ala Ile Tyr Ile Ala Cys Gly Gln Asp Ala Ala Gln Asn Val Gly  
755 760 765

Ser Ser Asn Cys Ile Thr Ile Met Glu Ala Thr Gly Pro Thr Tyr Glu  
770 775 780

Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile Glu Ile Gly Thr Val  
785 790 795 800

Gly Gly Gly Thr Asn Leu Ala Pro Gln Gln Ala Cys Leu Gln Met Leu  
805 810 815

Gly Val Gln Gly Ala Ser Thr Glu Thr Pro Gly Lys Asn Ala Cys Gln  
820 825 830

Leu Ala Gln Ile Val Cys Ser Thr Val Met Ala Gly Glu Leu Ser Leu  
835 840 845

Met Ala Ala Leu Ala Ala Gly His Leu Val Lys Ser His Met Val His  
850 855 860

Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Pro Gly Thr Cys Thr Lys  
865 870 875 880

Lys Ala Ala

<210> 305  
<211> 948  
<212> PRT  
<213> Schistosoma mansoni

<400> 305

Met Leu Lys Ile Leu Asn Thr Val Leu Leu Phe Phe Asp Cys Phe Ser  
1 5 10 15

Thr Gly Thr Phe Phe Val Leu Leu Ile Tyr Leu Phe Thr Arg Leu Arg  
20 25 30

Thr His Leu Leu His Phe Ser Ser Ser Asn Cys His Leu Asp Val Ile  
35 40 45

Ile Tyr Gln Ser Arg Ala Val Ile Ile Phe Leu Val Val Phe Val Tyr  
50 55 60

Phe Ile Gly Val Leu Thr Cys Lys Ile Asn Asp Lys Ile Leu Val His  
65 70 75 80

Thr Met Leu Arg Asn Lys Arg Gln Leu Asn Thr Leu Phe Tyr Thr Leu  
85 90 95

Ile Leu Phe Thr Phe Ala Leu Cys Ser Leu Ser Ser Val Leu Phe Val  
100 105 110

Pro Tyr Thr Ser Phe Ala Ile Phe Leu Leu Ser Thr Ser Val Phe Leu  
115 120 125

Leu Phe Ser Asp Leu Ser Val Phe Phe Ile Val Leu Glu Tyr Tyr Leu  
130 135 140

Leu Glu Ile Glu Leu Val Asn Tyr Glu His Ala Lys Arg His Cys Leu  
145 150 155 160

Leu Ser His Leu Phe Ser Asn Gln Leu Phe Val Asp His Met Leu Gly  
165 170 175

Met Phe Leu Lys Thr Ser Leu Phe Ser Ile Ser Thr Thr Ser Lys Tyr  
180 185 190

Ala Tyr Leu Glu Ser Ile Phe Lys Cys Thr Leu Met Glu Gln Ile Ile  
195 200 205

Tyr Ile Met Ile Val Phe Val Phe Leu Pro Ser Phe Met Arg Ile Phe  
210 215 220

Ala Ser Tyr Ala Lys Arg Met Tyr Gly Glu Gln Lys Lys Cys Leu Val  
225 230 235 240

Ser Asn Lys Gly Val Ser Ser Ser Thr Arg Lys Arg Arg His Ser Tyr  
245 250 255

Ser Ser Gly His Ser Tyr Val Glu Tyr Arg Arg Met Ser Val His Asn  
260 265 270

Leu Ile Gly Tyr Val Val Asn Pro Asn Cys His Tyr Lys Cys Trp Ser  
275 280 285

Thr Thr Phe Val Ile Phe Val Ser Leu Ile Ile Leu His Leu Asn Asn  
290 295 300

Arg Tyr Ser Glu Arg Ile Ser Ser Phe Lys His Asn Ser Ser Glu Asn  
305 310 315 320

Glu Val Phe Pro Val Leu Tyr His Ile Thr Ala Tyr Glu Val Thr Ser  
325 330 335

Ile Phe His Phe Ile Tyr Asn Ile Phe His Val Ile Asn Ala Asn Leu  
340 345 350

Val Val Tyr Leu Phe Leu Gly Leu Phe Leu Phe Lys Arg Ile Arg Leu  
355 360 365

Asn Lys Pro Ile Asn Ser Gln Leu Arg Asn Leu Asn Ile Pro Lys Ile  
370 375 380

Lys Glu Thr Leu Ile Ser Asp Gln Val Lys Gln Ser Pro Val Leu Pro  
385 390 395 400

Lys Phe Ser Lys Lys Leu Asn Asp Ile Pro Leu Gln Ser Arg Lys Arg  
405 410 415

Ile Tyr Cys Leu His Lys Asp Asp Asp Tyr Ile Asp Arg Asn Asp Ser  
420 425 430

Ser Ser Val Ser Thr Phe Ser Asn Thr Cys Lys Asn Ser Asn Glu Arg  
435 440 445

Pro Ser Asn Val Leu Asp Leu Asp Met Leu Thr Glu Lys Ile Lys Gln  
450 455 460

Gly Leu Gly His Glu Leu Ser Asp Thr Glu Ile Leu Gln Leu Leu Ser  
465 470 475 480

His Gly Arg Leu Lys Thr Arg Glu Leu Glu Ser Val Val Arg Asn Pro  
485 490 495

Phe Arg Ala Val Glu Leu Arg Arg Leu Asp Leu Ser Thr Phe Leu Asn  
500 505 510

Asn Pro His Ile Ile Glu Arg Ile Pro Tyr Lys Asp Tyr Asp Tyr Arg  
515 520 525

Leu Val Tyr Gly Gln Cys Cys Glu Glu Val Ile Gly Tyr Met Pro Ile  
530 535 540

Pro Val Gly Lys Ile Gly Pro Leu Leu Leu Asp Gly Arg Ser His Tyr  
545 550 555 560

Ile Pro Leu Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr Asn Arg  
565 570 575

Gly Cys Arg Ala Ile Phe Leu Ala Gly Gly Ile Lys Ser Val Val Tyr  
580 585 590

Arg Asp Gln Met Thr Arg Ala Pro Val Val Trp Phe Pro Ser Ile Ile  
595 600 605

Asp Ser Val Lys Cys Ile Ala Trp Ile Asp Ser Glu Glu Gly Phe Gln  
610 615 620

Thr Leu Lys Ser Ala Phe Asp Lys Thr Ser Ala His Val Asn Leu Leu  
625 630 635 640

Ser Val Phe Ala Cys Pro Ala Gly Arg Tyr Ile His Ile Arg Phe Ala  
645 650 655

Ala Arg Thr Gly Asp Ala Met Gly Met Asn Met Val Ser Lys Ala Thr  
660 665 670

Asp Ser Ala Leu His Cys Leu Lys Lys Tyr Phe Ser Asn Met Gln Val  
675 680 685

Ile Ser Leu Ser Gly Asn Met Cys Thr Asp Lys Lys Pro Ala Thr Ile  
690 695 700

Asn Thr Ile Leu Gly Arg Gly Lys Ser Val Ile Ala Glu Ala His Leu  
705 710 715 720

Ser Ala Asp Val Leu Ala Gln Val Leu His Thr Asn Ala Gln Arg Leu  
725 730 735

Ala Arg Leu Thr His Ser Lys Asn Trp Ile Gly Ser Ala Met Ala Gly  
740 745 750

Cys Pro Gly Met Met Gly Cys Asn Ala His Ala Ala Asn Ile Ile Ala  
755 760 765

Gly Met Phe Ala Ala Thr Gly Gln Asp Leu Ala Gln Val Val Asp Ser  
770 775 780

Ser Ser Cys Leu Thr Gln Leu Glu Val Asp Leu Ser Asp Asp Ser Leu  
785 790 795 800

Val Ala Ser Val Thr Met Pro Cys Leu Glu Val Gly Thr Val Gly Gly  
805 810 815

Gly Thr Arg Leu Ser Gly Gln Arg Ala Cys Leu Asp Leu Leu Asp Leu  
820 825 830

Ser Val Asp Arg Pro Thr Glu His Leu Ser Arg Ile Ile Ala Gly Thr  
835 840 845

Val Leu Ala Ala Glu Leu Ser Leu Met Ala Ala Leu Asp Thr Asp Asp  
850 855 860

Leu Val Lys Ala His Met His Phe Asn Arg Ala Lys Gln Ser Thr Asn  
865 870 875 880

Ser His Ser Cys Ser His Ser Thr Thr Asp Asn Asn Asp Asn Ile  
885 890 895

Ser Asn Ile Tyr Asp Asn His Asn Val Ala Leu Ser Ser Lys Ile Pro  
900 905 910

Val Thr Asp Asn Ser Asp Ile Arg Glu Ser Val His Ser Leu His Val  
915 920 925

Lys Pro Phe Pro Val Lys Ser Asp Leu Ser Val Asn Pro Glu Ile Ser  
930 935 940

His Tyr Thr Met  
945

<210> 306

<211> 887

<212> PRT

<213> Mesocricetus auratus

<400> 306

Met Leu Ser Arg Leu Phe Arg Met His Gly Leu Phe Val Ala Ser His  
1 5 10 15

Pro Trp Glu Val Ile Val Gly Thr Val Thr Leu Thr Ile Cys Met Met  
20 25 30

Ser Met Asn Met Phe Thr Gly Asn Asn Lys Ile Cys Gly Trp Asn Tyr  
35 40 45

Glu Cys Pro Lys Phe Glu Glu Asp Val Leu Ser Ser Asp Ile Ile Ile  
50 55 60

Leu Thr Ile Thr Arg Cys Ile Ala Ile Leu Tyr Ile Tyr Phe Gln Phe  
65 70 75 80

Gln Asn Leu Arg Gln Leu Gly Ser Lys Tyr Ile Leu Gly Ile Ala Gly  
85 90 95

Leu Phe Thr Ile Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His  
100 105 110

Phe Leu Asp Lys Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe  
115 120 125

Leu Leu Leu Ile Asp Leu Ser Arg Ala Ser Ala Leu Ala Lys Phe Ala  
130 135 140

Leu Ser Ser Asn Ser Gln Asp Glu Val Arg Glu Asn Ile Ala Arg Gly  
145 150 155 160

Met Ala Ile Leu Gly Pro Thr Phe Thr Leu Asp Ala Leu Val Glu Cys  
165 170 175

Leu Val Ile Gly Val Gly Thr Met Ser Gly Val Arg Gln Leu Glu Ile  
180 185 190

Met Cys Cys Phe Gly Cys Met Ser Val Leu Ala Asn Tyr Phe Val Phe  
195 200 205

Met Thr Phe Phe Pro Ala Cys Val Ser Leu Val Leu Glu Leu Ser Arg  
210 215 220

Glu Ser Arg Glu Gly Arg Pro Ile Trp Gln Leu Ser His Phe Ala Arg  
225 230 235 240

Val Leu Glu Glu Glu Asn Lys Pro Asn Pro Val Thr Gln Arg Val  
245 250 255

Lys Met Ile Met Ser Leu Gly Leu Val Leu Val His Ala His Ser Arg  
260 265 270

Trp Ile Ala Asp Pro Ser Pro Gln Asn Ser Thr Thr Glu His Ser Lys  
275 280 285

Val Ser Leu Gly Leu Asp Glu Asp Val Ser Lys Arg Ile Glu Pro Ser  
290 295 300

Val Ser Leu Trp Gln Phe Tyr Leu Ser Lys Met Ile Ser Met Asp Ile  
305 310 315 320

Glu Gln Val Val Thr Leu Ser Leu Ala Phe Leu Leu Ala Val Lys Tyr  
325 330 335

Ile Phe Phe Glu Gln Ala Glu Thr Glu Ser Thr Leu Ser Leu Lys Asn  
340 345 350

Pro Ile Thr Ser Pro Val Ala Thr Pro Lys Lys Ala Pro Asp Asn Cys  
355 360 365

Cys Arg Arg Glu Pro Val Leu Ser Arg Arg Asn Glu Lys Leu Ser Ser  
370 375 380

Val Glu Glu Glu Pro Gly Val Asn Gln Asp Arg Lys Val Glu Val Ile  
385 390 395 400

Lys Pro Leu Val Ala Glu Thr Glu Ser Thr Ser Arg Ala Thr Phe Val  
405 410 415

Leu Gly Ala Ser Gly Gly Cys Ser Pro Val Ala Leu Gly Thr Gln Glu  
420 425 430

Pro Glu Ile Glu Leu Pro Ser Glu Pro Arg Pro Asn Glu Glu Cys Leu  
435 440 445

Gln Ile Leu Glu Ser Ala Glu Lys Gly Ala Lys Phe Leu Ser Asp Ala  
450 455 460

Glu Ile Ile Gln Leu Val Asn Ala Lys His Ile Pro Ala Tyr Lys Leu  
465 470 475 480

Glu Thr Leu Met Glu Thr His Glu Arg Gly Val Ser Ile Arg Arg Gln  
485 490 495

Leu Leu Ser Thr Lys Leu Pro Glu Pro Ser Ser Leu Gln Tyr Leu Pro  
500 505 510

Tyr Arg Asp Tyr Asn Tyr Ser Leu Val Met Gly Ala Cys Cys Glu Asn  
515 520 525

Val Ile Gly Tyr Met Pro Ile Pro Val Gly Val Ala Gly Pro Leu Cys  
530 535 540

Leu Asp Gly Lys Glu Tyr Gln Val Pro Met Ala Thr Thr Glu Gly Cys  
545 550 555 560

Leu Val Ala Ser Thr Asn Arg Gly Cys Arg Ala Ile Gly Leu Gly Gly  
565 570 575

Gly Ala Ser Ser Arg Val Leu Ala Asp Gly Met Thr Arg Gly Pro Val  
580 585 590

Val Arg Leu Pro Arg Ala Cys Asp Ser Ala Glu Val Lys Ala Trp Leu  
595 600 605

Glu Thr Pro Glu Gly Phe Ala Val Ile Lys Asp Ala Phe Asp Ser Thr  
610 615 620

Ser Arg Phe Ala Arg Leu Gln Lys Leu His Val Thr Met Ala Gly Arg  
625 630 635 640

Asn Leu Tyr Ile Arg Phe Gln Ser Lys Thr Gly Asp Ala Met Gly Met  
645 650 655

Asn Met Ile Ser Lys Gly Thr Glu Lys Ala Leu Val Lys Leu Gln Glu  
660 665 670

Phe Phe Pro Glu Met Gln Ile Leu Ala Val Ser Gly Asn Tyr Cys Thr  
675 680 685

Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Thr  
690 695 700

Val Val Cys Glu Ala Val Ile Pro Ala Arg Val Val Arg Glu Val Leu

705

710

715

720

Lys Thr Thr Glu Ala Met Ile Asp Val Asn Ile Asn Lys Asn Leu  
725 730 735

Val Gly Ser Ala Met Ala Gly Ser Ile Gly Gly Tyr Asn Ala His Ala  
740 745 750

Ala Asn Ile Val Thr Ala Ile Tyr Ile Ala Cys Gly Gln Asp Ala Ala  
755 760 765

Gln Asn Val Gly Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser Gly  
770 775 780

Pro Thr Asn Glu Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile Glu  
785 790 795 800

Ile Gly Thr Val Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala Cys  
805 810 815

Leu Gln Met Leu Gly Val Gln Gly Ala Cys Lys Asp Asn Pro Gly Glu  
820 825 830

Asn Ala Arg Gln Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala Gly  
835 840 845

Glu Leu Ser Leu Met Ala Ala Leu Ala Ala Gly His Leu Val Arg Ser  
850 855 860

His Met Val His Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Gln Gly  
865 870 880

Thr Cys Thr Lys Lys Ala Ala  
885

<210> 307

<211> 916

<212> PRT

<213> Drosophila melanogaster .

<400> 307

Met Ile Gly Pro Leu Phe Arg Ala Thr Gln Phe Cys Ala Ser His Pro  
1 5 10 15

Trp Glu Val Ile Val Ala Leu Leu Thr Ile Thr Ala Cys Met Leu Asn  
20 25 30

Gly Gly Gln Glu Gln Tyr Pro Gly Cys Glu Gln Arg Ile Gly His Ser  
35 40 45

Thr Ala Ser Ala Ala Ala Gly Ser Gly Ser Gly Ala Gly Ser Gly  
50 55 60

Ala Ser Gly Thr Ile Pro Pro Ser Ser Met Gly Gly Ser Ala Thr Ser  
65 70 75 80

Ser Arg His Arg Pro Cys His Gly Trp Ser Gln Ser Cys Asp Gly Leu  
85 90 95

Glu Ala Glu Tyr Asn Ala Ala Asp Val Ile Leu Met Thr Ile Val Arg  
100 105 110

Cys Thr Ala Val Leu Tyr Cys Tyr Tyr Gln Phe Cys Ser Leu His Arg  
115 120 125

Leu Gly Ser Lys Tyr Val Leu Gly Ile Ala Gly Leu Phe Thr Val Phe  
130 135 140

Ser Ser Phe Ile Phe Thr Thr Ala Ile Ile Lys Phe Leu Gly Ser Asp  
145 150 155 160

Ile Ser Glu Leu Lys Asp Ala Leu Phe Phe Leu Leu Leu Val Ile Asp  
165 170 175

Leu Ser Asn Ser Gly Arg Leu Arg Ser Gly Ala Met Gly Ser Asn Gln  
180 185 190

Ala Glu Val Thr Gln Asn Ile Ala Arg Gly Leu Glu Leu Leu Gly Pro  
195 200 205

Ala Ile Ser Leu Asp Thr Ile Val Val Val Leu Leu Val Gly Val Gly  
210 215 220

Thr Leu Ser Gly Val Gln Arg Leu Glu Val Leu Cys Met Phe Ala Val  
225 230 235 240

Leu Ser Val Leu Val Asn Tyr Val Val Phe Met Thr Phe Tyr Pro Ala  
245 250 255

Cys Leu Ser Leu Ile Phe Asp Leu Ser Arg Ser Gly Val Asp Met Ser  
260 265 270

Val Val Arg Glu Lys Ala Lys Gly Ser Leu Pro Leu Lys Ser Leu Thr  
275 280 285

Glu Glu Glu Gln Lys Ala Asn Pro Val Leu Gln Arg Val Lys Leu Ile  
290 295 300

Met Thr Thr Gly Leu Met Ala Val His Ile Tyr Ser Arg Glu Val Ser  
305 310 315 320

Pro Ala Ala Thr Thr Met Val Asp Lys Thr Leu Thr Pro Thr Leu Ser  
325 330 335

Leu Asn Val Ser Asn Asn Arg Thr Glu Ser Gly Glu Ile Ala Asp Ile  
340 345 350

Ile Ile Lys Trp Leu Thr Met Ser Ala Asp His Ile Val Ile Ser Ile  
355 360 365

Val Leu Ile Ala Leu Val Val Lys Phe Ile Cys Phe Asp Asn Arg Asp  
370 375 380

Pro Leu Pro Asp Gln Leu Arg Gln Ser Gly Pro Val Ala Ile Glu Ala  
385 390 395 400

Lys Ala Ser Gln Thr Thr Pro Ile Asp Glu Glu His Val Glu Gln Glu  
405 410 415

Lys Asp Thr Glu Asn Ser Ala Ala Val Arg Thr Leu Leu Phe Thr Ile  
420 425 430

Glu Asp Gln Ser Ser Ala Asn Ala Ser Thr Gln Thr Asp Leu Leu Pro  
435 440 445

Leu Arg His Arg Leu Val Gly Pro Ile Lys Pro Pro Arg Pro Val Gln  
450 455 460

Glu Cys Leu Asp Ile Leu Asn Ser Thr Glu Glu Gly Ser Gly Pro Ala  
465 470 475 480

Ala Leu Ser Asp Glu Glu Ile Val Ser Ile Val His Ala Gly Gly Thr  
485 490 495

His Cys Pro Leu His Lys Ile Glu Ser Val Leu Asp Asp Pro Glu Arg  
500 505 510

Gly Val Arg Ile Arg Arg Gln Ile Ile Gly Ser Arg Ala Lys Met Pro

515

520

525

Val Gly Arg Leu Asp Val Leu Pro Tyr Glu His Phe Asp Tyr Arg Lys  
530 535 540

Val Leu Asn Ala Cys Cys Glu Asn Val Leu Gly Tyr Val Pro Ile Pro  
545 550 555 560

Val Gly Tyr Ala Gly Pro Leu Leu Leu Asp Gly Glu Thr Tyr Tyr Val  
565 570 575

Pro Met Ala Thr Thr Glu Gly Ala Leu Val Ala Ser Thr Asn Arg Gly  
580 585 590

Cys Lys Ala Leu Ser Val Arg Gly Val Arg Ser Val Val Glu Asp Val  
595 600 605

Gly Met Thr Arg Ala Pro Cys Val Arg Phe Pro Ser Val Ala Arg Ala  
610 615 620

Ala Glu Ala Lys Ser Trp Ile Glu Asn Asp Glu Asn Tyr Arg Val Val  
625 630 635 640

Lys Thr Glu Phe Asp Ser Thr Ser Arg Phe Gly Arg Leu Lys Asp Cys  
645 650 655

His Ile Ala Met Asp Gly Pro Gln Leu Tyr Ile Arg Phe Val Ala Ile  
660 665 670

Thr Gly Asp Arg Met Gly Met Asn Met Val Ser Lys Ala Leu Arg Trp  
675 680 685

Pro Phe Ala Glu Phe Thr Leu His Phe Pro Asp Met Gln Ile Ile Ser  
690 695 700

Leu Ser Gly Asn Phe Cys Cys Asp Lys Lys Pro Ala Ala Ile Asn Trp  
705 710 715 720

Ile Lys Gly Arg Gly Lys Arg Val Val Thr Glu Cys Thr Ile Ser Ala  
725 730 735

Ala Thr Leu Arg Ser Val Leu Lys Thr Asp Ala Lys Thr Leu Val Glu  
740 745 750

Cys Asn Lys Leu Lys Asn Met Gly Gly Ser Ala Met Ala Gly Ser Ile  
755 760 765

Gly Gly Asn Asn Ala His Ala Ala Asn Met Val Thr Ala Val Phe Leu  
770 775 780

Ala Thr Gly Gln Asp Pro Ala Gln Asn Val Thr Ser Ser Asn Cys Ser  
785 790 795 800

Thr Ala Met Glu Cys Trp Ala Glu Asn Ser Glu Asp Leu Tyr Met Thr  
805 810 815

Cys Thr Met Pro Ser Leu Glu Val Gly Thr Val Gly Gly Thr Gly  
820 825 830

Leu Pro Gly Gln Ser Ala Cys Leu Glu Met Leu Gly Val Arg Gly Ala  
835 840 845

His Ala Thr Arg Pro Gly Asp Asn Ala Lys Lys Leu Ala Gln Ile Val  
850 855 860

Cys Ala Thr Val Met Ala Gly Glu Leu Ser Leu Met Ala Ala Leu Val  
865 870 875 880

Asn Ser Asp Leu Val Lys Ser His Met Arg His Asn Arg Ser Ser Ile  
885 890 895

Ala Val Asn Ser Ala Asn Asn Pro Leu Asn Val Thr Val Ser Ser Cys  
900 905 910

Ser Thr Ile Ser  
915

<210> 308  
<211> 887  
<212> PRT  
<213> Cricetulus griseus

<400> 308

Met Leu Ser Arg Leu Phe Arg Met His Gly Leu Phe Val Ala Ser His  
1 5 10 15

Pro Trp Glu Val Ile Val Gly Thr Val Thr Leu Thr Ile Cys Met Met  
20 25 30

Ser Met Asn Met Phe Thr Gly Asn Asn Lys Ile Cys Gly Trp Asn Tyr  
35 40 45

Glu Cys Pro Lys Phe Glu Glu Asp Val Leu Ser Ser Asp Ile Ile Ile  
50 55 60

Leu Thr Ile Thr Arg Cys Ile Ala Ile Leu Tyr Ile Tyr Phe Gln Phe  
65 70 75 80

Gln Asn Leu Arg Gln Leu Gly Ser Lys Tyr Ile Leu Gly Ile Ala Gly  
85 90 95

Leu Phe Thr Ile Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His  
100 105 110

Phe Leu Asp Lys Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe  
115 120 125

Leu Leu Leu Ile Asp Leu Ser Arg Ala Ser Ala Leu Ala Lys Phe Ala  
130 135 140

Leu Ser Ser Asn Ser Gln Asp Glu Val Arg Glu Asn Ile Ala Arg Gly  
145 150 155 160

Met Ala Ile Leu Gly Pro Thr Phe Thr Leu Asp Ala Leu Val Glu Cys  
165 170 175

Leu Val Ile Gly Val Gly Thr Met Ser Gly Val Arg Gln Leu Glu Ile  
180 185 190

Met Cys Cys Phe Gly Cys Met Ser Val Leu Ala Asn Tyr Phe Val Phe  
195 200 205

Met Thr Phe Phe Pro Ala Cys Val Ser Leu Val Leu Glu Leu Ser Arg  
210 215 220

Glu Ser Arg Glu Gly Arg Pro Ile Trp Gln Leu Ser His Phe Ala Arg  
225 230 235 240

Val Leu Glu Glu Glu Asn Lys Pro Asn Pro Val Thr Gln Arg Val  
245 250 255

Lys Met Ile Met Ser Leu Gly Leu Val Leu Val His Ala His Ser Arg  
260 265 270

Trp Ile Ala Asp Pro Ser Pro Gln Asn Ser Thr Thr Glu His Ser Lys  
275 280 285

Val Ser Leu Gly Leu Asp Glu Asp Val Ser Lys Arg Ile Glu Pro Ser

290

295

300

Val Ser Leu Trp Gln Phe Tyr Leu Ser Lys Met Ile Ser Met Asp Ile  
305 310 315 320

Glu Gln Val Val Thr Leu Ser Leu Ala Phe Leu Leu Ala Val Lys Tyr  
325 330 335

Ile Phe Phe Glu Gln Ala Glu Thr Glu Ser Thr Leu Ser Leu Lys Asn  
340 345 350

Pro Ile Thr Ser Pro Val Val Thr Pro Lys Lys Ala Pro Asp Asn Cys  
355 360 365

Cys Arg Arg Glu Pro Leu Leu Val Arg Arg Ser Glu Lys Leu Ser Ser  
370 375 380

Val Glu Glu Glu Pro Gly Val Ser Gln Asp Arg Lys Val Glu Val Ile  
385 390 395 400

Lys Pro Leu Val Val Glu Thr Glu Ser Ala Ser Arg Ala Thr Phe Val  
405 410 415

Leu Gly Ala Ser Gly Thr Ser Pro Pro Val Ala Ala Arg Thr Gln Glu  
420 425 430

Leu Glu Ile Glu Leu Pro Ser Glu Pro Arg Pro Asn Glu Glu Cys Leu  
435 440 445

Gln Ile Leu Glu Ser Ala Glu Lys Gly Ala Lys Phe Leu Ser Asp Ala  
450 455 460

Glu Ile Ile Gln Leu Val Asn Ala Lys His Ile Pro Ala Tyr Lys Leu  
465 470 475 480

Glu Thr Leu Met Glu Thr His Glu Arg Gly Val Ser Ile Arg Arg Gln  
485 490 495

Leu Leu Ser Thr Lys Leu Pro Glu Pro Ser Ser Leu Gln Tyr Leu Pro  
500 505 510

Tyr Arg Asp Tyr Asn Tyr Ser Leu Val Met Gly Ala Cys Cys Glu Asn  
515 520 525

Val Ile Gly Tyr Met Pro Ile Pro Val Gly Val Ala Gly Pro Leu Cys  
530 535 540

Leu Asp Gly Lys Glu Tyr Gln Val Pro Met Ala Thr Thr Glu Gly Cys  
545 550 555 560

Leu Val Ala Ser Thr Asn Arg Gly Cys Arg Ala Ile Gly Leu Gly Gly  
565 570 575

Gly Ala Ser Ser Arg Val Leu Ala Asp Gly Met Thr Arg Gly Pro Val  
580 585 590

Val Arg Leu Pro Arg Ala Cys Asp Ser Ala Glu Val Lys Ala Trp Leu  
595 600 605

Glu Thr Pro Glu Gly Phe Ala Val Ile Lys Asp Ala Phe Asp Ser Thr  
610 615 620

Ser Arg Phe Ala Arg Leu Gln Lys Leu His Val Thr Met Ala Gly Arg  
625 630 635 640

Asn Leu Tyr Ile Arg Phe Gln Ser Lys Thr Gly Asp Ala Met Gly Met  
645 650 655

Asn Met Ile Ser Lys Gly Thr Glu Lys Ala Leu Leu Lys Leu Gln Glu  
660 665 670

Phe Phe Pro Glu Met Gln Ile Leu Ala Val Ser Gly Asn Tyr Cys Thr  
675 680 685

Asp Lys Lys Pro Ala Ala Ile Asn Trp Ile Glu Gly Arg Gly Lys Thr  
690 695 700

Val Val Cys Glu Ala Val Ile Pro Ala Lys Val Val Arg Glu Val Leu  
705 710 715 720

Lys Thr Thr Thr Glu Ala Met Ile Asp Val Asn Ile Asn Lys Asn Leu  
725 730 735

Val Gly Ser Ala Met Ala Gly Ser Ile Gly Gly Tyr Asn Ala His Ala  
740 745 750

Ala Asn Ile Val Thr Ala Ile Tyr Ile Ala Cys Gly Gln Asp Ala Ala  
755 760 765

Gln Asn Val Gly Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser Gly  
770 775 780

Pro Thr Asn Glu Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile Glu  
785 790 795 800

Ile Gly Thr Val Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala Cys  
805 810 815

Leu Gln Met Leu Gly Val Gln Gly Ala Cys Lys Asp Asn Pro Gly Glu  
820 825 830

Asn Ala Arg Gln Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala Gly  
835 840 845

Glu Leu Ser Leu Met Ala Ala Leu Ala Ala Gly His Leu Val Arg Ser  
850 855 860

His Met Val His Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Gln Gly  
865 870 875 880

Thr Cys Thr Lys Lys Ser Ala  
885

<210> 309  
<211> 1045  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 309

Met Ser Leu Pro Leu Lys Thr Ile Val His Leu Val Lys Pro Phe Ala  
1 5 10 15

Cys Thr Ala Arg Phe Ser Ala Arg Tyr Pro Ile His Val Ile Val Val  
20 25 30

Ala Val Leu Leu Ser Ala Ala Ala Tyr Leu Ser Val Thr Gln Ser Tyr  
35 40 45

Leu Asn Glu Trp Lys Leu Asp Ser Asn Gln Tyr Ser Thr Tyr Leu Ser  
50 55 60

Ile Lys Pro Asp Glu Leu Phe Glu Lys Cys Thr His Tyr Tyr Arg Ser  
65 70 75 80

Pro Val Ser Asp Thr Trp Lys Leu Leu Ser Ser Lys Glu Ala Ala Asp  
85 90 95

Ile Tyr Thr Pro Phe His Tyr Tyr Leu Ser Thr Ile Ser Phe Gln Ser

100

105

110

Lys Asp Asn Ser Thr Thr Leu Pro Ser Leu Asp Asp Val Ile Tyr Ser  
115 120 125

Val Asp His Thr Arg Tyr Leu Leu Ser Glu Glu Pro Lys Ile Pro Thr  
130 135 140

Glu Leu Val Ser Glu Asn Gly Thr Lys Trp Arg Leu Arg Asn Asn Ser  
145 150 155 160

Asn Phe Ile Leu Asp Leu His Asn Ile Tyr Arg Asn Met Val Lys Gln  
165 170 175

Phe Ser Asn Lys Thr Ser Glu Phe Asp Gln Phe Asp Leu Phe Ile Ile  
180 185 190

Leu Ala Ala Tyr Leu Thr Leu Phe Tyr Thr Leu Cys Cys Leu Phe Asn  
195 200 205

Asp Met Arg Lys Ile Gly Ser Lys Phe Trp Leu Ser Phe Ser Ala Leu  
210 215 220

Ser Asn Ser Ala Cys Ala Leu Tyr Leu Ser Leu Tyr Thr Thr His Ser  
225 230 235 240

Leu Leu Lys Lys Pro Ala Ser Leu Leu Ser Leu Val Ile Gly Leu Pro  
245 250 255

Phe Ile Val Val Ile Ile Gly Phe Lys His Lys Val Arg Leu Ala Ala  
260 265 270

Phe Ser Leu Gln Lys Phe His Arg Ile Ser Ile Asp Lys Lys Ile Thr  
275 280 285

Val Ser Asn Ile Ile Tyr Glu Ala Met Phe Gln Glu Gly Ala Tyr Leu  
290 295 300

Ile Arg Asp Tyr Leu Phe Tyr Ile Ser Ser Phe Ile Gly Cys Ala Ile  
305 310 315 320

Tyr Ala Arg His Leu Pro Gly Leu Val Asn Phe Cys Ile Leu Ser Thr  
325 330 335

Phe Met Leu Val Phe Asp Leu Leu Leu Ser Ala Thr Phe Tyr Ser Ala  
340 345 350

Ile Leu Ser Met Lys Leu Glu Ile Asn Ile Ile His Arg Ser Thr Val  
355 360 365

Ile Arg Gln Thr Leu Glu Glu Asp Gly Val Val Pro Thr Thr Ala Asp  
370 375 380

Ile Ile Tyr Lys Asp Glu Thr Ala Ser Glu Pro His Phe Leu Arg Ser  
385 390 395 400

Asn Val Ala Ile Ile Leu Gly Lys Ala Ser Val Ile Gly Leu Leu Leu  
405 410 415

Leu Ile Asn Leu Tyr Val Phe Thr Asp Lys Leu Asn Ala Thr Ile Leu  
420 425 430

Asn Thr Val Tyr Phe Asp Ser Thr Ile Tyr Ser Leu Pro Asn Phe Ile  
435 440 445

Asn Tyr Lys Asp Ile Gly Asn Leu Ser Asn Gln Val Ile Ile Ser Val  
450 455 460

Leu Pro Lys Gln Tyr Tyr Thr Pro Leu Lys Lys Tyr His Gln Ile Glu  
465 470 475 480

Asp Ser Val Leu Leu Ile Ile Asp Ser Val Ser Asn Ala Ile Arg Asp  
485 490 495

Gln Phe Ile Ser Lys Leu Leu Phe Phe Ala Phe Ala Val Ser Ile Ser  
500 505 510

Ile Asn Val Tyr Leu Leu Asn Ala Ala Lys Ile His Thr Gly Tyr Met  
515 520 525

Asn Phe Gln Pro Gln Ser Asn Lys Ile Asp Asp Leu Val Val Gln Gln  
530 535 540

Lys Ser Ala Thr Ile Glu Phe Ser Glu Thr Arg Ser Met Pro Ala Ser  
545 550 555 560

Ser Gly Leu Glu Thr Pro Val Thr Ala Lys Asp Ile Ile Ser Glu  
565 570 575

Glu Ile Gln Asn Asn Glu Cys Val Tyr Ala Leu Ser Ser Gln Asp Glu  
580 585 590

Pro Ile Arg Pro Leu Ser Asn Leu Val Glu Leu Met Glu Lys Glu Gln  
595 600 605

Leu Lys Asn Met Asn Asn Thr Glu Val Ser Asn Leu Val Val Asn Gly  
610 615 620

Lys Leu Pro Leu Tyr Ser Leu Glu Lys Lys Leu Glu Asp Thr Thr Arg  
625 630 635 640

Ala Val Leu Val Arg Arg Lys Ala Leu Ser Thr Leu Ala Glu Ser Pro  
645 650 655

Ile Leu Val Ser Glu Lys Leu Pro Phe Arg Asn Tyr Asp Tyr Asp Arg  
660 665 670

Val Phe Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr Met Pro Ile Pro  
675 680 685

Val Gly Val Ile Gly Pro Leu Ile Ile Asp Gly Thr Ser Tyr His Ile  
690 695 700

Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Ala Met Arg Gly  
705 710 715 720

Cys Lys Ala Ile Asn Ala Gly Gly Ala Thr Thr Val Leu Thr Lys  
725 730 735

Asp Gly Met Thr Arg Gly Pro Val Val Arg Phe Pro Thr Leu Ile Arg  
740 745 750

Ser Gly Ala Cys Lys Ile Trp Leu Asp Ser Glu Glu Gly Gln Asn Ser  
755 760 765

Ile Lys Lys Ala Phe Asn Ser Thr Ser Arg Phe Ala Arg Leu Gln His  
770 775 780

Ile Gln Thr Cys Leu Ala Gly Asp Leu Leu Phe Met Arg Phe Arg Thr  
785 790 795 800

Thr Thr Gly Asp Ala Met Gly Met Asn Met Ile Ser Lys Gly Val Glu  
805 810 815

Tyr Ser Leu Lys Gln Met Val Glu Glu Tyr Gly Trp Glu Asp Met Glu  
820 825 830

Val Val Ser Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys Pro Ala Ala  
835 840 845

Ile Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Ala Glu Ala Thr  
850 855 860

Ile Pro Gly Asp Val Val Lys Ser Val Leu Lys Ser Asp Val Ser Ala  
865 870 875 880

Leu Val Glu Leu Asn Ile Ser Lys Asn Leu Val Gly Ser Ala Met Ala  
885 890 895

Gly Ser Val Gly Gly Phe Asn Ala His Ala Ala Asn Leu Val Thr Ala  
900 905 910

Leu Phe Leu Ala Leu Gly Gln Asp Pro Ala Gln Asn Val Glu Ser Ser  
915 920 925

Asn Cys Ile Thr Leu Met Lys Glu Val Asp Gly Asp Leu Arg Ile Ser  
930 935 940

Val Ser Met Pro Ser Ile Glu Val Gly Thr Ile Gly Gly Thr Val  
945 950 955 960

Leu Glu Pro Gln Gly Ala Met Leu Asp Leu Leu Gly Val Arg Gly Pro  
965 970 975

His Pro Thr Glu Pro Gly Ala Asn Ala Arg Gln Leu Ala Arg Ile Ile  
980 985 990

Ala Cys Ala Val Leu Ala Gly Glu Leu Ser Leu Cys Ser Ala Leu Ala  
995 1000 1005

Ala Gly His Leu Val Gln Ser His Met Thr His Asn Arg Lys Thr  
1010 1015 1020

Asn Lys Ala Asn Glu Leu Pro Gln Pro Ser Asn Lys Gly Pro Pro  
1025 1030 1035

Cys Lys Thr Ser Ala Leu Leu  
1040 1045

<210> 310  
<211> 210  
<212> PRT  
<213> Hevea brasiliensis

<400> 310

Leu Glu Ser Asp Phe Ala Asp Met Asp Val Ile Gly Ile Ser Gly Asn  
1 5 10 15

Phe Cys Ser Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg  
20 25 30

Gly Lys Ser Val Val Cys Glu Ala Ile Ile Lys Glu Glu Val Val Lys  
35 40 45

Lys Val Leu Lys Thr Asp Val Ala Leu Leu Val Glu Leu Asn Met Leu  
50 55 60

Lys Asn Leu Ala Gly Ser Ala Val Ala Gly Ala Leu Gly Gly Phe Asn  
65 70 75 80

Ala His Ala Gly Asn Ile Val Ser Ala Ile Phe Ile Ala Thr Gly Gln  
85 90 95

Asp Pro Ala Gln Asn Val Glu Ser Ser His Cys Ile Thr Met Met Glu  
100 105 110

Ala Val Asn Asp Gly Lys Asp Leu His Ile Ser Val Thr Leu Pro Ser  
115 120 125

Ile Glu Val Gly Thr Val Gly Gly Thr Gln Leu Ala Ser Gln Ser  
130 135 140

Ala Cys Leu Asn Leu Leu Gly Val Met Gly Ala Cys Lys Glu Ser Pro  
145 150 155 160

Gly Ser Tyr Ser Arg Leu Leu Ala Thr Ile Val Ala Gly Ser Val Leu  
165 170 175

Ala Gly Glu Leu Ser Leu Met Ser Ala Ile Ala Ala Gly Gln Leu Val  
180 185 190

Lys Ser His Met Lys Tyr Asn Arg Ser Ser Lys Asp Val Ser Lys Ala  
195 200 205

Ala Ser  
210

<210> 311  
<211> 1054  
<212> PRT

<213> Saccharomyces cerevisiae

<400> 311

Met Pro Pro Leu Phe Lys Gly Leu Lys Gln Met Ala Lys Pro Ile Ala  
1 5 10 15

Tyr Val Ser Arg Phe Ser Ala Lys Arg Pro Ile His Ile Ile Leu Phe  
20 25 30

Ser Leu Ile Ile Ser Ala Phe Ala Tyr Leu Ser Val Ile Gln Tyr Tyr  
35 40 45

Phe Asn Gly Trp Gln Leu Asp Ser Asn Ser Val Phe Glu Thr Ala Pro  
50 55 60

Asn Lys Asp Ser Asn Thr Leu Phe Gln Glu Cys Ser His Tyr Tyr Arg  
65 70 75 80

Asp Ser Ser Leu Asp Gly Trp Val Ser Ile Thr Ala His Glu Ala Ser  
85 90 95

Glu Leu Pro Ala Pro His His Tyr Tyr Leu Leu Asn Leu Asn Phe Asn  
100 105 110

Ser Pro Asn Glu Thr Asp Ser Ile Pro Glu Leu Ala Asn Thr Val Phe  
115 120 125

Glu Lys Asp Asn Thr Lys Tyr Ile Leu Gln Glu Asp Leu Ser Val Ser  
130 135 140

Lys Glu Ile Ser Ser Thr Asp Gly Thr Lys Trp Arg Leu Arg Ser Asp  
145 150 155 160

Arg Lys Ser Leu Phe Asp Val Lys Thr Leu Ala Tyr Ser Leu Tyr Asp  
165 170 175

Val Phe Ser Glu Asn Val Thr Gln Ala Asp Pro Phe Asp Val Leu Ile  
180 185 190

Met Val Thr Ala Tyr Leu Met Met Phe Tyr Thr Ile Phe Gly Leu Phe  
195 200 205

Asn Asp Met Arg Lys Thr Gly Ser Asn Phe Trp Leu Ser Ala Ser Thr  
210 215 220

Val Val Asn Ser Ala Ser Ser Leu Phe Leu Ala Leu Tyr Val Thr Gln

225                    230                    235                    240

Cys Ile Leu Gly Lys Glu Val Ser Ala Leu Thr Leu Phe Glu Gly Leu  
245                    250                    255

Pro Phe Ile Val Val Val Gly Phe Lys His Lys Ile Lys Ile Ala  
260                    265                    270

Gln Tyr Ala Leu Glu Lys Phe Glu Arg Val Gly Leu Ser Lys Arg Ile  
275                    280                    285

Thr Thr Asp Glu Ile Val Phe Glu Ser Val Ser Glu Glu Gly Gly Arg  
290                    295                    300

Leu Ile Gln Asp His Leu Leu Cys Ile Phe Ala Phe Ile Gly Cys Ser  
305                    310                    315                    320

Met Tyr Ala His Gln Leu Lys Thr Leu Thr Asn Phe Cys Ile Leu Ser  
325                    330                    335

Ala Phe Ile Leu Ile Phe Glu Leu Ile Leu Thr Pro Thr Phe Tyr Ser  
340                    345                    350

Ala Ile Leu Ala Leu Arg Leu Glu Met Asn Val Ile His Arg Ser Thr  
355                    360                    365

Ile Ile Lys Gln Thr Leu Glu Glu Asp Gly Val Val Pro Ser Thr Ala  
370                    375                    380

Arg Ile Ile Ser Lys Ala Glu Lys Lys Ser Val Ser Ser Phe Leu Asn  
385                    390                    395                    400

Leu Ser Val Val Val Ile Ile Met Lys Leu Ser Val Ile Leu Leu Phe  
405                    410                    415

Val Phe Ile Asn Phe Tyr Asn Phe Gly Ala Asn Trp Val Asn Asp Ala  
420                    425                    430

Phe Asn Ser Leu Tyr Phe Asp Lys Glu Arg Val Ser Leu Pro Asp Phe  
435                    440                    445

Ile Thr Ser Asn Ala Ser Glu Asn Phe Lys Glu Gln Ala Ile Val Ser  
450                    455                    460

Val Thr Pro Leu Leu Tyr Tyr Lys Pro Ile Lys Ser Tyr Gln Arg Ile  
465                    470                    475                    480

Glu Asp Met Val Leu Leu Leu Arg Asn Val Ser Val Ala Ile Arg  
485 490 495

Asp Arg Phe Val Ser Lys Leu Val Leu Ser Ala Leu Val Cys Ser Ala  
500 505 510

Val Ile Asn Val Tyr Leu Leu Asn Ala Ala Arg Ile His Thr Ser Tyr  
515 520 525

Thr Ala Asp Gln Leu Val Lys Thr Glu Val Thr Lys Lys Ser Phe Thr  
530 535 540

Ala Pro Val Gln Lys Ala Ser Thr Pro Val Leu Thr Asn Lys Thr Val  
545 550 555 560

Ile Ser Gly Ser Lys Val Lys Ser Leu Ser Ser Ala Gln Ser Ser Ser  
565 570 575

Ser Gly Pro Ser Ser Ser Glu Glu Asp Asp Ser Arg Asp Ile Glu  
580 585 590

Ser Leu Asp Lys Lys Ile Arg Pro Leu Glu Glu Leu Glu Ala Leu Leu  
595 600 605

Ser Ser Gly Asn Thr Lys Gln Leu Lys Asn Lys Glu Val Ala Ala Leu  
610 615 620

Val Ile His Gly Lys Leu Pro Leu Tyr Ala Leu Glu Lys Lys Leu Gly  
625 630 635 640

Asp Thr Thr Arg Ala Val Ala Val Arg Arg Lys Ala Leu Ser Ile Leu  
645 650 655

Ala Glu Ala Pro Val Leu Ala Ser Asp Arg Leu Pro Tyr Lys Asn Tyr  
660 665 670

Asp Tyr Asp Arg Val Phe Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr  
675 680 685

Met Pro Leu Pro Val Gly Val Ile Gly Pro Leu Val Ile Asp Gly Thr  
690 695 700

Ser Tyr His Ile Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser  
705 710 715 720

Ala Met Arg Gly Cys Lys Ala Ile Asn Ala Gly Gly Gly Ala Thr Thr  
725 730 735

Val Leu Thr Lys Asp Gly Met Thr Arg Gly Pro Val Val Arg Phe Pro  
740 745 750

Thr Leu Lys Arg Ser Gly Ala Cys Lys Ile Trp Leu Asp Ser Glu Glu  
755 760 765

Gly Gln Asn Ala Ile Lys Lys Ala Phe Asn Ser Thr Ser Arg Phe Ala  
770 775 780

Arg Leu Gln His Ile Gln Thr Cys Leu Ala Gly Asp Leu Leu Phe Met  
785 790 800

Arg Phe Arg Thr Thr Gly Asp Ala Met Gly Met Asn Met Ile Ser  
805 810 815

Lys Gly Val Glu Tyr Ser Leu Lys Gln Met Val Glu Glu Tyr Gly Trp  
820 825 830

Glu Asp Met Glu Val Val Ser Val Ser Gly Asn Tyr Cys Thr Asp Lys  
835 840 845

Lys Pro Ala Ala Ile Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val  
850 855 860

Ala Glu Ala Thr Ile Pro Gly Asp Val Val Arg Lys Val Leu Lys Ser  
865 870 875 880

Asp Val Ser Ala Leu Val Glu Leu Asn Ile Ala Lys Asn Leu Val Gly  
885 890 895

Ser Ala Met Ala Gly Ser Val Gly Phe Asn Ala His Ala Ala Asn  
900 905 910

Leu Val Thr Ala Val Phe Leu Ala Leu Gly Gln Asp Pro Ala Gln Asn  
915 920 925

Val Glu Ser Ser Asn Cys Ile Thr Leu Met Lys Glu Val Asp Gly Asp  
930 935 940

Leu Arg Ile Ser Val Ser Met Pro Ser Ile Glu Val Gly Thr Ile Gly  
945 950 955 960

Gly Gly Thr Val Leu Glu Pro Gln Gly Ala Met Leu Asp Leu Leu Gly  
965 970 975

Val Arg Gly Pro His Ala Thr Ala Pro Gly Thr Asn Ala Arg Gln Leu  
980 985 990

Ala Arg Ile Val Ala Cys Ala Val Leu Ala Gly Glu Leu Ser Leu Cys  
995 1000 1005

Ala Ala Leu Ala Ala Gly His Leu Val Gln Ser His Met Thr His  
1010 1015 1020

Asn Arg Lys Pro Ala Glu Pro Thr Lys Pro Asn Asn Leu Asp Ala  
1025 1030 1035

Thr Asp Ile Asn Arg Leu Lys Asp Gly Ser Val Thr Cys Ile Lys  
1040 1045 1050

Ser

<210> 312  
<211> 575  
<212> PRT  
<213> Hevea brasiliensis

<400> 312

Met Asp Thr Thr Gly Arg Leu His His Arg Lys His Ala Thr Pro Val  
1 5 10 15

Glu Asp Arg Ser Pro Thr Thr Pro Lys Ala Ser Asp Ala Leu Pro Leu  
20 25 30

Pro Leu Tyr Leu Thr Asn Ala Val Phe Phe Thr Leu Phe Phe Ser Val  
35 40 45

Ala Tyr Tyr Leu Leu His Arg Trp Arg Asp Lys Ile Arg Asn Ser Thr  
50 55 60

Pro Leu His Ile Val Thr Leu Ser Glu Ile Val Ala Ile Val Ser Leu  
65 70 75 80

Ile Ala Ser Phe Ile Tyr Leu Leu Gly Phe Phe Gly Ile Asp Phe Val  
85 90 95

Gln Ser Phe Ile Ala Arg Ala Ser His Asp Val Trp Asp Leu Glu Asp  
100 105 110

Thr Asp Pro Asn Tyr Leu Ile Asp Glu Asp His Arg Leu Val Thr Cys  
115 120 125

Pro Pro Ala Asn Ile Ser Thr Lys Thr Thr Ile Ile Ala Ala Pro Thr  
130 135 140

Lys Leu Pro Thr Ser Glu Pro Leu Ile Ala Pro Leu Val Ser Glu Glu  
145 150 155 160

Asp Glu Met Ile Val Asn Ser Val Val Asp Gly Lys Ile Pro Ser Tyr  
165 170 175

Ser Leu Glu Ser Lys Leu Gly Asp Cys Lys Arg Ala Ala Ala Ile Arg  
180 185 190

Arg Glu Ala Leu Gln Arg Met Thr Arg Arg Ser Leu Glu Gly Leu Pro  
195 200 205

Val Glu Gly Phe Asp Tyr Glu Ser Ile Leu Gly Gln Cys Cys Glu Met  
210 215 220

Pro Val Gly Tyr Val Gln Ile Pro Val Gly Ile Ala Gly Pro Leu Leu  
225 230 235 240

Leu Asn Gly Arg Glu Tyr Ser Val Pro Met Ala Thr Thr Glu Gly Cys  
245 250 255

Leu Val Ala Ser Thr Asn Arg Gly Cys Lys Ala Ile Tyr Leu Ser Gly  
260 265 270

Gly Ala Thr Ser Val Leu Leu Lys Asp Gly Met Thr Arg Ala Pro Val  
275 280 285

Val Arg Phe Ala Ser Ala Thr Arg Ala Ala Glu Leu Lys Phe Phe Leu  
290 295 300

Glu Asp Pro Asp Asn Phe Asp Thr Leu Ala Val Val Phe Asn Lys Ser  
305 310 315 320

Ser Arg Phe Ala Arg Leu Gln Gly Ile Lys Cys Ser Ile Ala Gly Lys  
325 330 335

Asn Leu Tyr Ile Arg Phe Ser Cys Ser Thr Gly Asp Ala Met Gly Met  
340 345 350

Asn Met Val Ser Lys Gly Val Gln Asn Val Leu Glu Phe Leu Gln Ser  
355 360 365

Asp Phe Ser Asp Met Asp Val Ile Gly Ile Ser Gly Asn Phe Cys Ser  
370 375 380

Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Ser  
385 390 395 400

Val Val Cys Glu Ala Ile Ile Lys Glu Glu Val Val Lys Lys Val Leu  
405 410 415

Lys Thr Asn Val Ala Ser Leu Val Glu Leu Asn Met Leu Lys Asn Leu  
420 425 430

Ala Gly Ser Ala Val Ala Gly Ala Leu Gly Gly Phe Asn Ala His Ala  
435 440 445

Gly Asn Ile Val Ser Ala Ile Phe Ile Ala Thr Gly Gln Asp Pro Ala  
450 455 460

Gln Asn Val Glu Ser Ser His Cys Ile Thr Met Met Glu Ala Val Asn  
465 470 475 480

Asp Gly Lys Asp Leu His Ile Ser Val Thr Met Pro Ser Ile Glu Val  
485 490 495

Gly Thr Val Gly Gly Thr Gln Leu Ala Ser Gln Ser Ala Cys Leu  
500 505 510

Asn Leu Leu Gly Val Lys Gly Ala Asn Lys Glu Ser Pro Gly Ser Asn  
515 520 525

Ser Arg Leu Leu Ala Ala Ile Val Ala Gly Ser Val Leu Ala Gly Glu  
530 535 540

Leu Ser Leu Met Ser Ala Ile Ala Ala Gly Gln Leu Val Lys Ser His  
545 550 555 560

Met Lys Tyr Asn Arg Ser Ser Lys Asp Met Ser Lys Ala Ala Ser  
565 570 575

<210> 313  
<211> 520  
<212> PRT  
<213> Rattus norvegicus

<400> 313

Met Pro Gly Ser Leu Pro Leu Asn Ala Glu Ala Cys Trp Pro Lys Asp  
1 5 10 15

Val Gly Ile Val Ala Leu Glu Ile Tyr Phe Pro Ser Gln Tyr Val Asp  
20 25 30

Gln Ala Glu Leu Glu Lys Tyr Asp Gly Val Asp Ala Gly Lys Tyr Thr  
35 40 45

Ile Gly Leu Gly Gln Ala Arg Met Gly Phe Cys Thr Asp Arg Glu Asp  
50 55 60

Ile Asn Ser Leu Cys Leu Thr Val Val Gln Lys Leu Met Glu Arg Asn  
65 70 75 80

Ser Leu Ser Tyr Asp Cys Ile Gly Arg Leu Glu Val Gly Thr Glu Thr  
85 90 95

Ile Ile Asp Lys Ser Lys Ser Val Lys Ser Asn Leu Met Gln Leu Phe  
100 105 110

Glu Glu Ser Gly Asn Thr Asp Ile Glu Gly Ile Asp Thr Thr Asn Ala  
115 120 125

Cys Tyr Gly Gly Thr Ala Ala Val Phe Asn Ala Val Asn Trp Ile Glu  
130 135 140

Ser Ser Ser Trp Asp Gly Arg Tyr Ala Leu Val Val Ala Gly Asp Ile  
145 150 155 160

Ala Ile Tyr Ala Ser Gly Asn Ala Arg Pro Thr Gly Gly Val Gly Ala  
165 170 175

Val Ala Leu Leu Ile Gly Pro Asn Ala Pro Val Ile Phe Asp Arg Gly  
180 185 190

Leu Arg Gly Thr His Met Gln His Ala Tyr Asp Phe Tyr Lys Pro Asp  
195 200 205

Met Leu Ser Glu Tyr Pro Val Val Asp Gly Lys Leu Ser Ile Gln Cys  
210 215 220

Tyr Leu Ser Ala Leu Asp Arg Cys Tyr Ser Val Tyr Arg Lys Lys Ile  
225 230 235 240

Arg Ala Gln Trp Gln Lys Glu Gly Lys Asp Lys Asp Phe Thr Leu Asn  
245 250 255

Asp Phe Gly Phe Met Ile Phe His Ser Pro Tyr Cys Lys Leu Val Gln  
260 265 270

Lys Ser Leu Ala Arg Met Phe Leu Asn Asp Phe Leu Asn Asp Gln Asn  
275 280 285

Arg Asp Lys Asn Ser Ile Tyr Ser Gly Leu Glu Ala Phe Gly Asp Val  
290 295 300

Lys Leu Glu Asp Thr Tyr Phe Asp Arg Asp Val Glu Lys Ala Phe Met  
305 310 315 320

Lys Ala Ser Ala Glu Leu Phe Asn Gln Lys Thr Lys Ala Ser Leu Leu  
325 330 335

Val Ser Asn Gln Asn Gly Asn Met Tyr Thr Ser Ser Val Tyr Gly Ser  
340 345 350

Leu Ala Ser Val Leu Ala Gln Tyr Ser Pro Gln Gln Leu Ala Gly Lys  
355 360 365

Arg Ile Gly Val Phe Ser Tyr Gly Ser Gly Leu Ala Ala Thr Leu Tyr  
370 375 380

Ser Leu Lys Val Thr Gln Asp Ala Thr Pro Gly Ser Ala Leu Asp Lys  
385 390 395 400

Ile Thr Ala Ser Leu Cys Asp Leu Lys Ser Arg Leu Asp Ser Arg Thr  
405 410 415

Cys Val Ala Pro Asp Val Phe Ala Glu Asn Met Lys Leu Arg Glu Asp  
420 425 430

Thr His His Leu Ala Asn Tyr Ile Pro Gln Cys Ser Ile Asp Ser Leu  
435 440 445

Phe Glu Gly Thr Trp Tyr Leu Val Arg Val Asp Glu Lys His Arg Arg  
450 455 460

Thr Tyr Ala Arg Arg Pro Ser Thr Asn Asp His Ser Leu Asp Glu Gly  
465 470 475 480

Val Gly Leu Val His Ser Asn Thr Ala Thr Glu His Ile Pro Ser Pro  
485 490 495

Ala Lys Lys Val Pro Arg Leu Pro Ala Thr Ser Gly Glu Pro Glu Ser  
500 505 510

Ala Val Ile Ser Asn Gly Glu His  
515 520

<210> 314  
<211> 520  
<212> PRT  
<213> Cricetulus griseus

<400> 314

Met Pro Gly Ser Leu Pro Leu Asn Ala Glu Ala Cys Trp Pro Lys Asp  
1 5 10 15

Val Gly Ile Val Ala Leu Glu Ile Tyr Phe Pro Ser Gln Tyr Val Asp  
20 25 30

Gln Ala Glu Leu Glu Lys Tyr Asp Gly Val Asp Ala Gly Lys Tyr Thr  
35 40 45

Ile Gly Leu Gly Gln Ala Arg Met Gly Phe Cys Thr Asp Arg Glu Asp  
50 55 60

Ile Asn Ser Leu Cys Leu Thr Val Val Gln Asn Leu Met Glu Arg Asn  
65 70 75 80

Ser Leu Ser Tyr Asp Cys Ile Gly Arg Leu Glu Val Gly Thr Glu Thr  
85 90 95

Ile Ile Asp Lys Ser Lys Ser Val Lys Ser Asn Leu Met Gln Leu Phe  
100 105 110

Glu Glu Ser Gly Asn Thr Asp Ile Glu Gly Ile Asp Thr Thr Asn Ala  
115 120 125

Cys Tyr Gly Gly Thr Ala Ala Val Phe Asn Ala Val Asn Trp Ile Glu  
130 135 140

Ser Ser Ser Trp Asp Gly Arg Tyr Ala Leu Val Val Ala Gly Asp Ile  
145 150 155 160

Ala Ile Tyr Ala Thr Gly Asn Ala Arg Pro Thr Gly Gly Val Gly Ala

165

170

175

Val Ala Leu Leu Ile Gly Pro Asn Ala Pro Leu Ile Phe Asp Arg Gly  
180 185 190

Leu Arg Gly Thr His Met Gln His Ala Tyr Asp Phe Tyr Lys Pro Asp  
195 200 205

Met Leu Ser Glu Tyr Pro Ile Val Asp Gly Lys Leu Ser Ile Gln Cys  
210 215 220

Tyr Leu Ser Ala Leu Asp Arg Cys Tyr Ser Val Tyr Arg Lys Lys Ile  
225 230 235 240

Arg Ala Gln Trp Gln Lys Glu Gly Asn Asp Asn Asp Phe Thr Leu Asn  
245 250 255

Asp Phe Gly Phe Met Ile Ser His Ser Pro Tyr Cys Lys Leu Val Gln  
260 265 270

Lys Ser Leu Ala Arg Met Phe Leu Asn Asp Phe Leu Asn Asp Gln Asn  
275 280 285

Arg Asp Lys Asn Ser Ile Tyr Ser Gly Leu Glu Ala Phe Gly Asp Val  
290 295 300

Lys Leu Glu Asp Thr Tyr Phe Asp Arg Asp Val Glu Lys Ala Phe Met  
305 310 315 320

Lys Ala Ser Ser Glu Leu Phe Asn Gln Lys Thr Lys Ala Ser Leu Leu  
325 330 335

Val Ser Asn Gln Asn Gly Asn Met Tyr Thr Ser Ser Val Tyr Gly Ser  
340 345 350

Leu Ala Ser Val Leu Ala Gln Tyr Ser Pro Gln Gln Leu Ala Gly Lys  
355 360 365

Arg Ile Gly Val Phe Ser Tyr Gly Ser Gly Leu Ala Ala Thr Leu Tyr  
370 375 380

Ser Leu Lys Val Thr Gln Asp Ala Thr Pro Gly Ser Ala Leu Asp Lys  
385 390 395 400

Val Thr Ala Ser Leu Cys Asp Leu Lys Ser Arg Leu Asp Ser Arg Thr  
405 410 415

Cys Val Ala Pro Asp Val Phe Ala Glu Asn Met Lys Leu Arg Glu Asp  
420 425 430

Thr His His Leu Ala Asn Tyr Ile Pro Gln Cys Ser Ile Asp Ser Leu  
435 440 445

Phe Glu Gly Thr Trp Tyr Leu Val Arg Val Asp Glu Lys His Arg Arg  
450 455 460

Thr Tyr Ala Arg Arg Pro Ser Thr Asn Asp His Asn Leu Gly Asp Gly  
465 470 475 480

Val Gly Leu Val His Ser Asn Thr Ala Thr Glu His Ile Pro Ser Pro  
485 490 495

Ala Lys Lys Val Pro Arg Leu Pro Ala Thr Ala Ala Glu Ser Glu Ser  
500 505 510

Ala Val Ile Ser Asn Gly Glu His  
515 520

<210> 315  
<211> 522  
<212> PRT  
<213> Gallus gallus

<400> 315

Met Pro Gly Ser Leu Pro Val Asn Thr Glu Ser Cys Trp Pro Lys Asp  
1 5 10 15

Val Gly Ile Val Ala Leu Glu Ile Tyr Phe Pro Ser Gln Tyr Val Asp  
20 25 30

Gln Thr Glu Leu Glu Lys Tyr Asp Gly Val Asp Ala Gly Lys Tyr Thr  
35 40 45

Ile Gly Leu Gly Gln Ser Lys Met Gly Phe Cys Ser Asp Arg Glu Asp  
50 55 60

Ile Asn Ser Leu Cys Leu Thr Val Val Gln Lys Leu Met Glu Arg Asn  
65 70 75 80

Ser Leu Ser Tyr Asp Cys Ile Gly Arg Leu Glu Val Gly Thr Glu Thr  
85 90 95

Ile Ile Asp Lys Ser Lys Ser Val Lys Thr Val Leu Met Gln Leu Phe  
100 105 110

Glu Glu Ser Gly Asn Thr Asp Val Glu Gly Ile Asp Thr Thr Asn Ala  
115 120 125

Cys Tyr Gly Gly Thr Ala Ala Leu Phe Asn Ala Ile Asn Trp Ile Glu  
130 135 140

Ser Ser Ser Trp Asp Gly Arg Tyr Ala Leu Val Val Ala Gly Asp Ile  
145 150 155 160

Ala Val Tyr Ala Thr Gly Asn Ala Arg Pro Thr Gly Gly Ala Gly Ala  
165 170 175

Val Ala Met Leu Val Gly Ser Asn Ala Pro Leu Ile Phe Glu Arg Gly  
180 185 190

Leu Arg Gly Thr His Met Gln His Ala Tyr Asp Phe Tyr Lys Pro Asp  
195 200 205

Met Val Ser Glu Tyr Pro Val Val Asp Gly Lys Leu Ser Ile Gln Cys  
210 215 220

Tyr Leu Ser Ala Leu Asp Arg Cys Tyr Ser Val Tyr Arg Asn Lys Ile  
225 230 235 240

His Ala Gln Trp Gln Lys Glu Gly Thr Asp Arg Gly Phe Thr Leu Asn  
245 250 255

Asp Phe Gly Phe Met Ile Phe His Ser Pro Tyr Cys Lys Leu Val Gln  
260 265 270

Lys Ser Val Ala Arg Leu Leu Leu Asn Asp Phe Leu Ser Asp Gln Asn  
275 280 285

Ala Glu Thr Ala Asn Gly Val Phe Ser Gly Leu Glu Ala Phe Arg Asp  
290 295 300

Val Lys Leu Glu Asp Thr Tyr Phe Asp Arg Asp Val Glu Lys Ala Phe  
305 310 315 320

Met Lys Ala Ser Ala Glu Leu Phe Asn Gln Lys Thr Lys Ala Ser Leu  
325 330 335

Leu Val Ser Asn Gln Asn Gly Asn Met Tyr Thr Pro Ser Val Tyr Gly

340

345

350

Cys Leu Ala Ser Leu Leu Ala Gln Tyr Ser Pro Glu His Leu Ala Gly  
355 360 365

Gln Arg Ile Ser Glu Phe Ser Tyr Gly Ser Gly Phe Ala Ala Thr Leu  
370 375 380

Tyr Ser Ile Arg Val Thr Gln Asp Ala Thr Pro Gly Ser Ala Leu Asp  
385 390 395 400

Lys Ile Thr Ala Ser Leu Ser Asp Leu Lys Ala Arg Leu Asp Ser Arg  
405 410 415

Lys Cys Ile Ala Pro Asp Val Phe Ala Glu Asn Met Lys Ile Arg Gln  
420 425 430

Glu Thr His His Leu Ala Asn Tyr Ile Pro Gln Cys Ser Val Glu Asp  
435 440 445

Leu Phe Glu Gly Thr Trp Tyr Leu Val Arg Val Asp Glu Lys His Arg  
450 455 460

Arg Thr Tyr Ala Arg Arg Pro Val Met Gly Asp Gly Pro Leu Glu Ala  
465 470 475 480

Gly Val Glu Val Val His Pro Gly Ile Val His Glu His Ile Pro Ser  
485 490 495

Pro Ala Lys Lys Val Pro Arg Ile Pro Ala Thr Thr Glu Ser Glu Gly  
500 505 510

Val Thr Val Ala Ile Ser Asn Gly Val His  
515 520

<210> 316  
<211> 508  
<212> PRT  
<213> Rattus norvegicus

<400> 316

Met Gln Arg Leu Leu Ala Pro Ala Arg Arg Val Leu Gln Val Lys Arg  
1 5 10 15

Val Met Gln Glu Ser Ser Leu Ser Pro Ala His Leu Leu Pro Ala Ala  
20 25 30

Gln Gln Arg Phe Ser Thr Ile Pro Pro Ala Pro Leu Ala Lys Thr Asp  
35 40 45

Thr Trp Pro Lys Asp Val Gly Ile Leu Ala Leu Glu Val Tyr Phe Pro  
50 55 60

Ala Gln Tyr Val Asp Gln Thr Asp Leu Glu Lys Phe Asn Asn Val Glu  
65 70 75 80

Ala Gly Lys Tyr Thr Val Gly Leu Gly Gln Thr Arg Met Gly Phe Cys  
85 90 95

Ser Val Gln Glu Asp Ile Asn Ser Leu Cys Leu Thr Val Val Gln Arg  
100 105 110

Leu Met Glu Arg Thr Lys Leu Pro Trp Asp Ala Val Gly Arg Leu Glu  
115 120 125

Val Gly Thr Glu Thr Ile Ile Asp Lys Ser Lys Ala Val Lys Thr Val  
130 135 140

Leu Met Glu Leu Phe Gln Asp Ser Gly Asn Thr Asp Ile Glu Gly Ile  
145 150 155 160

Asp Thr Thr Asn Ala Cys Tyr Gly Gly Thr Ala Ser Leu Phe Asn Ala  
165 170 175

Ala Asn Trp Met Glu Ser Ser Tyr Trp Asp Gly Arg Tyr Ala Leu Val  
180 185 190

Val Cys Gly Asp Ile Ala Val Tyr Pro Ser Gly Asn Pro Arg Pro Thr  
195 200 205

Gly Gly Ala Gly Ala Val Ala Met Leu Ile Gly Pro Lys Ala Pro Leu  
210 215 220

Val Leu Glu Gln Gly Leu Arg Gly Thr His Met Glu Asn Ala Tyr Asp  
225 230 235 240

Phe Tyr Lys Pro Asn Leu Ala Ser Glu Tyr Pro Leu Val Asp Gly Lys  
245 250 255

Leu Ser Ile Gln Cys Tyr Leu Arg Ala Leu Asp Arg Cys Tyr Ala Ala  
260 265 270

Tyr Arg Arg Lys Ile Gln Asn Gln Trp Lys Gln Ala Gly Asn Asn Gln  
275 280 285

Pro Phe Thr Leu Asp Asp Val Gln Tyr Met Ile Phe His Thr Pro Phe  
290 295 300

Cys Lys Met Val Gln Lys Ser Leu Ala Arg Leu Met Phe Asn Asp Phe  
305 310 315 320

Leu Ser Ser Ser Ser Asp Lys Gln Asn Asn Leu Tyr Lys Gly Leu Glu  
325 330 335

Ala Phe Lys Gly Leu Lys Leu Glu Glu Thr Tyr Thr Asn Lys Asp Val  
340 345 350

Asp Lys Ala Leu Leu Lys Ala Ser Leu Asp Met Phe Asn Lys Lys Thr  
355 360 365

Lys Ala Ser Leu Tyr Leu Ser Thr Asn Asn Gly Asn Met Tyr Thr Ser  
370 375 380

Ser Leu Tyr Gly Cys Leu Ala Ser Leu Leu Ser His His Ser Ala Gln  
385 390 395 400

Glu Leu Ala Gly Ser Arg Ile Gly Ala Phe Ser Tyr Gly Ser Gly Leu  
405 410 415

Ala Ala Ser Phe Phe Ser Phe Arg Val Ser Lys Asp Ala Ser Pro Gly  
420 425 430

Ser Pro Leu Glu Lys Leu Val Ser Ser Val Ser Asp Leu Pro Lys Arg  
435 440 445

Leu Asp Ser Arg Arg Arg Met Ser Pro Glu Glu Phe Thr Glu Ile Met  
450 455 460

Asn Gln Arg Glu Gln Phe Tyr His Lys Val Asn Phe Ser Pro Pro Gly  
465 470 475 480

Asp Thr Ser Asn Leu Phe Pro Gly Thr Trp Tyr Leu Glu Arg Val Asp  
485 490 495

Glu Met His Arg Arg Lys Tyr Ala Arg Arg Pro Val  
500 505

<210> 317

<211> 567

<212> PRT

<213> Artemisia annua

<400> 317

Met Asp Leu Arg Arg Lys Leu Pro Pro Lys Pro Pro Ser Ser Thr Thr  
1 5 10 15

Thr Lys Gln Pro Ser His Arg Ser His Ser Pro Thr Pro Ile Pro Lys  
20 25 30

Ala Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Thr Phe Phe  
35 40 45

Phe Thr Leu Phe Phe Ser Val Ala Tyr Tyr Leu Leu His Arg Trp Arg  
50 55 60

Asp Lys Ile Arg Ser Gly Thr Pro Leu His Val Val Thr Leu Thr Glu  
65 70 75 80

Leu Ser Ala Ile Val Leu Leu Ile Ala Ser Phe Ile Tyr Leu Leu Gly  
85 90 95

Phe Phe Gly Ile Asp Phe Val Gln Ser Phe Thr Ser Arg Glu Asn Glu  
100 105 110

Gln Leu Asn Asn Asp Asp His Asn Val Val Ser Thr Asn Asn Val Leu  
115 120 125

Ser Asp Arg Arg Leu Val Tyr Asp Tyr Gly Phe Asp Val Thr Gly Asp  
130 135 140

Asn Asp Asn Asp Asn Asp Asp Val Ile Val Lys Ser Val Val Ser  
145 150 155 160

Gly Glu Val Asn Ser Tyr Ser Leu Glu Ala Ser Leu Gly Asp Cys Tyr  
165 170 175

Arg Ala Ala Lys Ile Arg Lys Arg Ala Val Glu Arg Ile Val Gly Arg  
180 185 190

Glu Val Leu Gly Leu Gly Phe Glu Gly Phe Asp Tyr Glu Ser Ile Leu  
195 200 205

Gly Gln Cys Cys Glu Met Pro Ile Gly Tyr Val Gln Val Pro Val Gly  
210 215 220

Val Ala Gly Pro Leu Leu Leu Asn Gly Gly Glu Phe Met Val Pro Met  
225 230 235 240

Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr Asn Arg Gly Cys Lys  
245 250 255

Ala Ile Cys Leu Ser Gly Gly Ala Thr Ala Ile Leu Leu Lys Asp Gly  
260 265 270

Met Thr Arg Ala Pro Val Val Arg Phe Ala Thr Ala Glu Arg Ala Ser  
275 280 285

Gln Leu Lys Phe Tyr Leu Glu Asp Gly Val Asn Phe Asp Thr Leu Ser  
290 295 300

Val Val Phe Asn Lys Ser Ser Arg Phe Ala Arg Leu Gln Asn Ile Gln  
305 310 315 320

Cys Ser Ile Ala Gly Lys Asn Leu Tyr Ile Arg Phe Thr Cys Ser Thr  
325 330 335

Gly Asp Ala Met Gly Met Asn Met Val Ser Lys Gly Val Gln Asn Val  
340 345 350

Leu Asp Phe Leu Gln Asn Asp Phe Pro Asp Met Asp Val Ile Gly Ile  
355 360 365

Ser Trp Lys Phe Cys Ser Asp Lys Lys Pro Thr Ala Val Asn Trp Ile  
370 375 380

Glu Gly Arg Gly Lys Ser Val Val Phe Gln Ala Val Ile Thr Lys Lys  
385 390 395 400

Val Val Arg Lys Ser Ala Leu Asn Pro Gln Thr Cys Thr Cys Arg Thr  
405 410 415

Leu Thr Cys Leu Arg Pro Leu Leu Val Leu Leu Leu Val Leu Leu  
420 425 430

Val Asp Leu Met His Met Leu His Ile Val Ser Ala Val Phe Ile Ala  
435 440 445

Thr Gly Gln Asp Pro Ala Gln Asn Ile Glu Ser Ser His Cys Ile Thr  
450 455 460

Met Met Glu Ala Val Asn Asn Gly Lys Asp Leu His Val Asn Val Thr  
465 470 475 480

Met Pro Ser Ile Glu Val Gly Thr Val Gly Gly Thr Gln Leu Ala  
485 490 495

Ser Gln Ser Ala Cys Leu Asn Leu Leu Gly Val Lys Gly Ala Cys Ile  
500 505 510

Glu Ser Pro Gly Ser Asn Ala Gln Leu Leu Ala Arg Ile Val Ala Gly  
515 520 525

Ser Val Leu Ala Gly Glu Leu Ser Leu Met Ser Ala Ile Ser Ala Gly  
530 535 540

Gln Leu Val Lys Ser His Met Lys Tyr Asn Arg Ser Ser Arg Asp Met  
545 550 555 560

Ser Ala Ile Ala Ser Lys Val  
565

<210> 318  
<211> 428  
<212> PRT  
<213> Pseudomonas mevalonii  
  
<400> 318

Met Ser Leu Asp Ser Arg Leu Pro Ala Phe Arg Asn Leu Ser Pro Ala  
1 5 10 15

Ala Arg Leu Asp His Ile Gly Gln Leu Leu Gly Leu Ser His Asp Asp  
20 25 30

Val Ser Leu Leu Ala Asn Ala Gly Ala Leu Pro Met Asp Ile Ala Asn  
35 40 45

Gly Met Ile Glu Asn Val Ile Gly Thr Phe Glu Leu Pro Tyr Ala Val  
50 55 60

Ala Ser Asn Phe Gln Ile Asn Gly Arg Asp Val Leu Val Pro Leu Val  
65 70 75 80

Val Glu Glu Pro Ser Ile Val Ala Ala Ser Tyr Met Ala Lys Leu  
85 90 95

Ala Arg Ala Asn Gly Gly Phe Thr Thr Ser Ser Ser Ala Pro Leu Met  
100 105 110

His Ala Gln Val Gln Ile Val Gly Ile Gln Asp Pro Leu Asn Ala Arg  
115 120 125

Leu Ser Leu Leu Arg Arg Lys Asp Glu Ile Ile Glu Leu Ala Asn Arg  
130 .135 140

Lys Asp Gln Leu Leu Asn Ser Leu Gly Gly Cys Arg Asp Ile Glu  
145 150 155 160

Val His Thr Phe Ala Asp Thr Pro Arg Gly Pro Met Leu Val Ala His  
165 170 175

Leu Ile Val Asp Val Arg Asp Ala Met Gly Ala Asn Thr Val Asn Thr  
180 185 190

Met Ala Glu Ala Val Ala Pro Leu Met Glu Ala Ile Thr Gly Gly Gln  
195 200 205

Val Arg Leu Arg Ile Leu Ser Asn Leu Ala Asp Leu Arg Leu Ala Arg  
210 215 220

Ala Gln Val Arg Ile Thr Pro Gln Gln Leu Glu Thr Ala Glu Phe Ser  
225 230 235 240

Gly Glu Ala Val Ile Glu Gly Ile Leu Asp Ala Tyr Ala Phe Ala Ala  
245 250 255

Val Asp Pro Tyr Arg Ala Ala Thr His Asn Lys Gly Ile Met Asn Gly  
260 265 270

Ile Asp Pro Leu Ile Val Ala Thr Gly Asn Asp Trp Arg Ala Val Glu  
275 280 285

Ala Gly Ala His Ala Tyr Ala Cys Arg Ser Gly His Tyr Gly Ser Leu  
290 295 300

Thr Thr Trp Glu Lys Asp Asn Asn Gly His Leu Val Gly Thr Leu Glu  
305 310 315 320

Met Pro Met Pro Val Gly Leu Val Gly Gly Ala Thr Lys Thr His Pro  
325 330 335

Leu Ala Gln Leu Ser Leu Arg Ile Leu Gly Val Lys Thr Ala Gln Ala  
340 345 350

Leu Ala Glu Ile Ala Val Ala Val Gly Leu Ala Gln Asn Leu Gly Ala  
355 360 365

Met Arg Ala Leu Ala Thr Glu Gly Ile Gln Arg Gly His Met Ala Leu  
370 375 380

His Ala Arg Asn Ile Ala Val Val Ala Gly Ala Arg Gly Asp Glu Val  
385 390 395 400

Asp Trp Val Ala Arg Gln Leu Val Glu Tyr His Asp Val Arg Ala Asp  
405 410 415

Arg Ala Val Ala Leu Leu Lys Gln Lys Arg Gly Gln  
420 425

<210> 319  
<211> 428  
<212> PRT  
<213> *Pseudomonas mevalonii*

<400> 319

Met Ser Leu Asp Ser Arg Leu Pro Ala Phe Arg Asn Leu Ser Pro Ala  
1 5 10 15

Ala Arg Leu Asp His Ile Gly Gln Leu Leu Gly Leu Ser His Asp Asp  
20 25 30

Val Ser Leu Leu Ala Asn Ala Gly Ala Leu Pro Met Asp Ile Ala Asn  
35 40 45

Gly Met Ile Glu Asn Val Ile Gly Thr Phe Glu Leu Pro Tyr Ala Val  
50 55 60

Ala Ser Asn Phe Gln Ile Asn Gly Arg Asp Val Leu Val Pro Leu Val  
65 70 75 80

Val Glu Glu Pro Ser Ile Val Ala Ala Ser Tyr Met Ala Lys Leu  
85 90 95

Ala Arg Ala Asn Gly Gly Phe Thr Thr Ser Ser Ser Ala Pro Leu Met  
100 105 110

His Ala Gln Val Gln Ile Val Gly Ile Gln Asp Pro Leu Asn Ala Arg  
115 120 125

Leu Ser Leu Leu Arg Arg Lys Asp Glu Ile Ile Glu Leu Ala Asn Arg

130                    135                    140

Lys Asp Gln Leu Leu Asn Ser Leu Gly Gly Gly Cys Arg Asp Ile Glu  
145                    150                    155                    160

Val His Thr Phe Ala Asp Thr Pro Arg Gly Pro Met Leu Val Ala His  
165                    170                    175

Leu Ile Val Asp Val Arg Asp Ala Met Gly Ala Asn Thr Val Asn Thr  
180                    185                    190

Met Ala Glu Ala Val Ala Pro Leu Met Glu Ala Ile Thr Gly Gly Gln  
195                    200                    205

Val Arg Leu Arg Ile Leu Ser Asn Leu Ala Asp Leu Arg Leu Ala Arg  
210                    215                    220

Ala Gln Val Arg Ile Thr Pro Gln Gln Leu Glu Thr Ala Glu Phe Ser  
225                    230                    235                    240

Gly Glu Ala Val Ile Glu Gly Ile Leu Asp Ala Tyr Ala Phe Ala Ala  
245                    250                    255

Val Asp Pro Tyr Arg Ala Ala Thr His Asn Lys Gly Ile Met Asn Gly  
260                    265                    270

Ile Asp Pro Leu Ile Val Ala Thr Gly Asn Asp Trp Arg Ala Val Glu  
275                    280                    285

Ala Gly Ala His Ala Tyr Ala Cys Arg Ser Gly His Tyr Gly Ser Leu  
290                    295                    300

Thr Thr Trp Glu Lys Asp Asn Asn Gly His Leu Val Gly Thr Leu Glu  
305                    310                    315                    320

Met Pro Met Pro Val Gly Leu Val Gly Gly Ala Thr Lys Thr His Pro  
325                    330                    335

Leu Ala Gln Leu Ser Leu Arg Ile Leu Gly Val Lys Thr Ala Gln Ala  
340                    345                    350

Leu Ala Glu Ile Ala Val Ala Val Gly Leu Ala Gln Asn Leu Gly Ala  
355                    360                    365

Met Arg Ala Leu Ala Thr Glu Gly Ile Gln Arg Gly His Met Ala Leu  
370                    375                    380

His Ala Arg Asn Ile Ala Val Val Ala Gly Ala Arg Gly Asp Glu Val  
385 390 395 400

Asp Trp Val Ala Arg Gln Leu Val Glu Tyr His Asp Val Arg Ala Asp  
405 410 415

Arg Ala Val Ala Leu Leu Lys Gln Lys Arg Gly Gln  
420 425

<210> 320  
<211> 428  
<212> PRT  
<213> Pseudomonas mevalonii

<400> 320

Met Ser Leu Asp Ser Arg Leu Pro Ala Phe Arg Asn Leu Ser Pro Ala  
1 5 10 15

Ala Arg Leu Asp His Ile Gly Gln Leu Leu Gly Leu Ser His Asp Asp  
20 25 30

Val Ser Leu Leu Ala Asn Ala Gly Ala Leu Pro Met Asp Ile Ala Asn  
35 40 45

Gly Met Ile Glu Asn Val Ile Gly Thr Phe Glu Leu Pro Tyr Ala Val  
50 55 60

Ala Ser Asn Phe Gln Ile Asn Gly Arg Asp Val Leu Val Pro Leu Val  
65 70 75 80

Val Glu Glu Pro Ser Ile Val Ala Ala Ser Tyr Met Ala Lys Leu  
85 90 95

Ala Arg Ala Asn Gly Gly Phe Thr Thr Ser Ser Ser Ala Pro Leu Met  
100 105 110

His Ala Gln Val Gln Ile Val Gly Ile Gln Asp Pro Leu Asn Ala Arg  
115 120 125

Leu Ser Leu Leu Arg Arg Lys Asp Glu Ile Ile Glu Leu Ala Asn Arg  
130 135 140

Lys Asp Gln Leu Leu Asn Ser Leu Gly Gly Cys Arg Asp Ile Glu  
145 150 155 160

Val His Thr Phe Ala Asp Thr Pro Arg Gly Pro Met Leu Val Ala His  
165 170 175

Leu Ile Val Asp Val Arg Asp Ala Met Gly Ala Asn Thr Val Asn Thr  
180 185 190

Met Ala Glu Ala Val Ala Pro Leu Met Glu Ala Ile Thr Gly Gly Gln  
195 200 205

Val Arg Leu Arg Ile Leu Ser Asn Leu Ala Asp Leu Arg Leu Ala Arg  
210 215 220

Ala Gln Val Arg Ile Thr Pro Gln Gln Leu Glu Thr Ala Glu Phe Ser  
225 230 235 240

Gly Glu Ala Val Ile Glu Gly Ile Leu Asp Ala Tyr Ala Phe Ala Ala  
245 250 255

Val Asp Pro Tyr Arg Ala Ala Thr His Asn Lys Gly Ile Met Asn Gly  
260 265 270

Ile Asp Pro Leu Ile Val Ala Thr Gly Asn Asp Trp Arg Ala Val Glu  
275 280 285

Ala Gly Ala His Ala Tyr Ala Cys Arg Ser Gly His Tyr Gly Ser Leu  
290 295 300

Thr Thr Trp Glu Lys Asp Asn Asn Gly His Leu Val Gly Thr Leu Glu  
305 310 315 320

Met Pro Met Pro Val Gly Leu Val Gly Gly Ala Thr Lys Thr His Pro  
325 330 335

Leu Ala Gln Leu Ser Leu Arg Ile Leu Gly Val Lys Thr Ala Gln Ala  
340 345 350

Leu Ala Glu Ile Ala Val Ala Val Gly Leu Ala Gln Asn Leu Gly Ala  
355 360 365

Met Arg Ala Leu Ala Thr Glu Gly Ile Gln Arg Gly His Met Ala Leu  
370 375 380

His Ala Arg Asn Ile Ala Val Val Ala Gly Ala Arg Gly Asp Glu Val  
385 390 395 400

Asp Trp Val Ala Arg Gln Leu Val Glu Tyr His Asp Val Arg Ala Asp

405

410

415

Arg Ala Val Ala Leu Leu Lys Gln Lys Arg Gly Gln  
420 425

<210> 321  
<211> 428  
<212> PRT  
<213> Pseudomonas mevalonii

<400> 321

Met Ser Leu Asp Ser Arg Leu Pro Ala Phe Arg Asn Leu Ser Pro Ala  
1 5 10 15

Ala Arg Leu Asp His Ile Gly Gln Leu Leu Gly Leu Ser His Asp Asp  
20 25 30

Val Ser Leu Leu Ala Asn Ala Gly Ala Leu Pro Met Asp Ile Ala Asn  
35 40 45

Gly Met Ile Glu Asn Val Ile Gly Thr Phe Glu Leu Pro Tyr Ala Val  
50 55 60

Ala Ser Asn Phe Gln Ile Asn Gly Arg Asp Val Leu Val Pro Leu Val  
65 70 75 80

Val Glu Glu Pro Ser Ile Val Ala Ala Ser Tyr Met Ala Lys Leu  
85 90 95

Ala Arg Ala Asn Gly Gly Phe Thr Thr Ser Ser Ala Pro Leu Met  
100 105 110

His Ala Gln Val Gln Ile Val Gly Ile Gln Asp Pro Leu Asn Ala Arg  
115 120 125

Leu Ser Leu Leu Arg Arg Lys Asp Glu Ile Ile Glu Leu Ala Asn Arg  
130 135 140

Lys Asp Gln Leu Leu Asn Ser Leu Gly Gly Cys Arg Asp Ile Glu  
145 150 155 160

Val His Thr Phe Ala Asp Thr Pro Arg Gly Pro Met Leu Val Ala His  
165 170 175

Leu Ile Val Asp Val Arg Asp Ala Met Gly Ala Asn Thr Val Asn Thr  
180 185 190

Met Ala Glu Ala Val Ala Pro Leu Met Glu Ala Ile Thr Gly Gly Gln  
195 200 205

Val Arg Leu Arg Ile Leu Ser Asn Leu Ala Asp Leu Arg Leu Ala Arg  
210 215 220

Ala Gln Val Arg Ile Thr Pro Gln Gln Leu Glu Thr Ala Glu Phe Ser  
225 230 235 240

Gly Glu Ala Val Ile Glu Gly Ile Leu Asp Ala Tyr Ala Phe Ala Ala  
245 250 255

Val Asp Pro Tyr Arg Ala Ala Thr His Asn Lys Gly Ile Met Asn Gly  
260 265 270

Ile Asp Pro Leu Ile Val Ala Thr Gly Asn Asp Trp Arg Ala Val Glu  
275 280 285

Ala Gly Ala His Ala Tyr Ala Cys Arg Ser Gly His Tyr Gly Ser Leu  
290 295 300

Thr Thr Trp Glu Lys Asp Asn Asn Gly His Leu Val Gly Thr Leu Glu  
305 310 315 320

Met Pro Met Pro Val Gly Leu Val Gly Gly Ala Thr Lys Thr His Pro  
325 330 335

Leu Ala Gln Leu Ser Leu Arg Ile Leu Gly Val Lys Thr Ala Gln Ala  
340 345 350

Leu Ala Glu Ile Ala Val Ala Val Gly Leu Ala Gln Asn Leu Gly Ala  
355 360 365

Met Arg Ala Leu Ala Thr Glu Gly Ile Gln Arg Gly His Met Ala Leu  
370 375 380

His Ala Arg Asn Ile Ala Val Val Ala Gly Ala Arg Gly Asp Glu Val  
385 390 395 400

Asp Trp Val Ala Arg Gln Leu Val Glu Tyr His Asp Val Arg Ala Asp  
405 410 415

Arg Ala Val Ala Leu Leu Lys Gln Lys Arg Gly Gln  
420 425

<210> 322  
<211> 560  
<212> PRT  
<213> Oryza sativa

<400> 322

Met Glu Val Arg Arg Arg Ala Pro Leu Pro Pro Pro Pro Gly Arg Val  
1 5 10 15

Gln Ala Gly Asp Ala Leu Pro Leu Pro Ile Arg His Thr Asn Leu Ile  
20 25 30

Phe Ser Ala Leu Phe Ala Ala Ser Leu Ala Tyr Leu Met Arg Arg Trp  
35 40 45

Arg Glu Lys Ile Arg Ser Ser Thr Pro Leu His Val Val Gly Leu Ala  
50 55 60

Glu Met Leu Ala Ile Phe Gly Leu Val Ala Ser Leu Ile Tyr Leu Leu  
65 70 75 80

Ser Phe Phe Gly Ile Ala Phe Val Gln Ser Ile Val Ser Ser Ser Asp  
85 90 95

Asp Glu Glu Glu Asp Phe Leu Val Gly Pro Ala Arg Gly Ser Ser Ala  
100 105 110

Ala Ala Ala Val Ala Pro Arg Ala Pro Ser Ser Pro Ala Gln Cys Ser  
115 120 125

Leu Leu Gly Ser Pro His Asp Asp Ala Ala Arg Glu Arg Met Pro Glu  
130 135 140

Glu Asp Glu Glu Ile Val Ser Ser Val Val Ala Gly Lys Val Pro Ser  
145 150 155 160

Tyr Val Leu Glu Thr Lys Leu Gly Asp Cys Arg Arg Ala Ala Gly Ile  
165 170 175

Arg Arg Glu Ala Val Arg Arg Ile Thr Gly Arg Gln Ile Glu Gly Leu  
180 185 190

Pro Leu Asp Gly Phe Asp Tyr Ala Ser Ile Leu Gly Gln Cys Cys Glu  
195 200 205

Leu Pro Val Gly Tyr Val Gln Leu Pro Val Gly Ile Ala Gly Pro Leu  
210 215 220

Leu Leu Asp Gly Gln Arg Phe Tyr Val Pro Met Ala Thr Thr Glu Gly  
225 230 235 240

Cys Leu Val Ala Ser Thr Asn Arg Gly Cys Lys Ala Ile Ala Glu Ser  
245 250 255

Gly Gly Ala Val Ser Val Val Leu Arg Asp Gly Met Thr Arg Ala Pro  
260 265 270

Val Ala Arg Leu Pro Thr Ala Arg Arg Ala Ala Glu Leu Lys Ala Phe  
275 280 285

Leu Glu Asp Ser Val Asn Phe Asn Thr Leu Ser Met Val Phe Asn Arg  
290 295 300

Ser Ser Arg Phe Ala Arg Leu Gln Gly Val Gln Cys Ala Met Ala Gly  
305 310 315 320

Arg Asn Leu Tyr Met Arg Phe Ser Cys Cys Thr Gly Asp Ala Met Gly  
325 330 335

Met Asn Met Val Ser Lys Gly Glu Gln Asn Val Leu Asp Tyr Leu Gln  
340 345 350

Asp Asp Phe Pro Asp Met Asp Val Ile Ser Ile Ser Gly Asn Phe Cys  
355 360 365

Ser Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly Lys  
370 375 380

Ser Val Val Cys Glu Ala Val Ile Lys Glu Asp Val Val Lys Lys Val  
385 390 395 400

Leu Lys Thr Asn Val Gln Ser Leu Val Glu Leu Asn Val Ile Lys Asn  
405 410 415

Leu Ala Gly Ser Ala Val Ala Gly Ala Leu Gly Gly Phe Asn Ala His  
420 425 430

Ala Ser Asn Ile Val Thr Ala Ile Phe Ile Ala Thr Gly Gln Asp Pro  
435 440 445

Ala Gln Asn Val Glu Ser Ser His Cys Ile Thr Met Leu Glu Ala Val  
450 455 460

Asn Asp Gly Arg Asp Leu His Ile Ser Val Thr Met Pro Ser Ile Glu  
465 470 475 480

Val Gly Thr Val Gly Gly Thr Gln Leu Ala Ser Gln Ala Ala Cys  
485 490 495

Leu Asp Leu Leu Gly Val Lys Gly Ala Asn Arg Glu Ser Pro Gly Ser  
500 505 510

Asn Ala Arg Leu Leu Ala Thr Val Val Ala Gly Gly Val Leu Ala Gly  
515 520 525

Glu Leu Ser Leu Leu Ser Ala Leu Arg Ala Gly Gln Leu Val Lys Ser  
530 535 540

His Met Lys Tyr Asn Arg Ser Ser Lys Asp Met Ser Lys Val Ile Ser  
545 550 555 560

<210> 323

<211> 587

<212> PRT

<213> Cucumis melo

<400> 323

Met Asp Arg Arg Arg Ser Leu Arg Pro Pro Arg Pro Asn Ala Val Gln  
1 5 10 15

Asp Ala Asp Ala Thr Cys Thr Phe Arg Arg Asp Glu Gln Asp Ala Ser  
20 25 30

Ala Ala Asp His Leu Lys Arg Ala Ser Pro Lys Ala Ser Asp Ala Leu  
35 40 45

Pro Leu Pro Leu Tyr Leu Thr Asn Thr Ile Phe Phe Thr Leu Phe Phe  
50 55 60

Ser Val Ala Tyr Tyr Leu Leu His Arg Trp Arg Asp Lys Ile Arg Asn  
65 70 75 80

Ser Thr Pro Leu His Val Val Thr Leu Ser Glu Ile Ala Ala Ile Val  
85 90 95

Ser Leu Met Ala Ser Phe Ile Tyr Leu Leu Gly Phe Phe Gly Ile Asp  
100 105 110

Phe Val Gln Ser Phe Ile Ala Arg Ser Ser Pro Asp Ala Trp Asp Leu

115

120

125

Glu Asp Glu Ile Asp Arg Thr Leu Leu Ile Asp Asn Asn Arg Tyr Ala  
130 135 140

Ala Pro Arg Ser Ala Ser Ala Val Ala Leu Pro Ser Lys Val Val Asp  
145 150 155 160

Ala Glu Ala Leu Asn Thr Ile Pro Leu Pro Glu Glu Asp Glu Glu Val  
165 170 175

Val Lys Met Val Val Asp Gly Ser Val Pro Ser Tyr Ser Leu Glu Ser  
180 185 190

Lys Leu Gly Asp Pro Lys Arg Ala Ala Ser Ile Arg Arg Glu Ala Leu  
195 200 205

Gln Arg Thr Thr Gly Arg Ser Ile His Gly Leu Pro Phe Glu Gly Phe  
210 215 220

Asp Tyr Glu Ser Ile Leu Gly Gln Cys Cys Glu Met Pro Val Gly Tyr  
225 230 235 240

Val Gln Ile Pro Val Gly Ile Ala Gly Pro Leu Leu Leu Asp Gly Phe  
245 250 255

Glu Tyr Thr Val Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser  
260 265 270

Thr Asn Arg Gly Cys Lys Ala Ile Tyr Ala Ser Gly Gly Ala Thr Ser  
275 280 285

Met Leu Leu Lys Asp Gly Met Thr Arg Ala Pro Val Val Arg Phe Gly  
290 295 300

Ser Ala Lys Arg Ala Ser Glu Leu Lys Phe Phe Leu Glu Asp Pro Ser  
305 310 315 320

Asn Phe Asp Thr Leu Ala Val Val Phe Asn Arg Ser Ser Arg Phe Ala  
325 330 335

Arg Leu Gln Ser Ile Arg Cys Ser Ile Ala Gly Lys Asn Leu Tyr Val  
340 345 350

Arg Phe Cys Cys Ser Thr Gly Asp Ala Met Gly Met Asn Met Val Ser  
355 360 365

Lys Gly Val Gln Asn Val Leu Glu Phe Leu Gln His Asp Phe Ser Asp  
370 375 380

Met Glu Val Ile Gly Ile Ser Gly Asn Phe Cys Ala Asp Lys Lys Pro  
385 390 395 400

Ala Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu  
405 410 415

Ala Val Ile Lys Asp Glu Val Val Arg Lys Val Leu Lys Thr Ser Val  
420 425 430

Ala Ser Leu Val Glu Leu Asn Met Leu Lys Asn Leu Thr Gly Ser Ala  
435 440 445

Met Ala Gly Ala Leu Gly Gly Phe Asn Ala His Ser Ser Asn Ile Val  
450 455 460

Ser Ala Ile Phe Leu Ala Thr Gly Gln Asp Pro Ala Gln Asn Val Glu  
465 470 475 480

Ser Ser His Cys Ile Thr Met Met Glu Pro Val Asn Asn Gly Arg Asp  
485 490 495

Leu His Ile Ser Val Thr Met Pro Ser Ile Glu Val Gly Thr Val Gly  
500 505 510

Gly Gly Thr Gln Leu Ala Ser Gln Ser Ala Cys Leu Asn Leu Leu Gly  
515 520 525

Val Lys Gly Ala Ser Lys Glu Ser Pro Gly Ala Asn Ser Arg Leu Leu  
530 535 540

Ala Thr Ile Val Ala Gly Ser Val Leu Ala Gly Glu Leu Ser Leu Met  
545 550 555 560

Ser Ala Ile Ala Ala Gly Gln Leu Val Arg Ser His Met Lys Tyr Asn  
565 570 575

Arg Ser Ser Arg Asp Val Ser Lys Leu Glu Ser  
580 585

<210> 324  
<211> 121  
<212> PRT

<213> Glycine max

<400> 324

Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala Ile Ile Lys Glu Glu  
1 5 10 15

Val Val Gln Lys Val Leu Lys Thr Asn Val Ser Ala Leu Val Glu Leu  
20 25 30

Asn Met Leu Lys Asn Leu Ala Gly Ser Ala Val Ala Gly Ala Leu Gly  
35 40 45

Gly Phe Asn Ala His Ala Ser Asn Ile Val Ser Ala Ile Phe Ile Ala  
50 55 60

Thr Gly Gln Asp Pro Ala Gln Asn Val Glu Ser Ser His Cys Ile Thr  
65 70 75 80

Met Met Glu Ala Ile Asn Asp Gly Arg Asp Leu His Ile Ser Val Thr  
85 90 95

Met Pro Ser Ile Glu Val Gly Thr Val Gly Gly Thr Gln Leu Ala  
100 105 110

Ser Gln Ser Ala Cys Leu Asn Leu Leu  
115 120

<210> 325

<211> 236

<212> PRT

<213> Schistosoma mansoni

<400> 325

Met Leu Lys Ile Leu Asn Thr Val Leu Leu Phe Phe Asp Cys Phe Ser  
1 5 10 15

Thr Gly Thr Phe Phe Val Leu Leu Ile Tyr Leu Phe Thr Arg Leu Arg  
20 25 30

Thr His Leu Leu His Phe Ser Ser Ser Asn Cys His Leu Asp Val Ile  
35 40 45

Ile Tyr Gln Ser Arg Ala Val Ile Ile Phe Leu Val Val Phe Val Tyr  
50 55 60

Phe Ile Gly Val Leu Thr Cys Lys Ile Asn Asp Lys Ile Leu Val His  
65 70 75 80

Thr Met Leu Arg Asn Lys Arg Gln Leu Asn Thr Leu Phe Tyr Thr Leu  
85 90 95

Ile Leu Phe Thr Phe Ala Leu Cys Ser Leu Ser Ser Val Leu Phe Val  
100 105 110

Pro Tyr Thr Ser Phe Ala Ile Phe Leu Leu Ser Thr Ser Val Phe Leu  
115 120 125

Leu Phe Ser Asp Leu Ser Val Phe Phe Ile Val Leu Glu Tyr Tyr Leu  
130 135 140

Leu Glu Ile Glu Leu Val Asn Tyr Glu His Ala Lys Arg His Cys Leu  
145 150 155 160

Leu Ser His Leu Phe Ser Asn Gln Leu Phe Val Asp His Met Leu Gly  
165 170 175

Met Phe Leu Lys Thr Ser Leu Phe Ser Ile Ser Thr Thr Ser Lys Tyr  
180 185 190

Ala Tyr Leu Glu Ser Ile Phe Lys Cys Thr Leu Met Glu Gln Ile Ile  
195 200 205

Tyr Ile Met Ile Val Phe Val Phe Leu Pro Ser Phe Met Arg Ile Phe  
210 215 220

Ala Ser Tyr Ala Lys Arg Met Tyr Gly Glu Gln Lys  
225 230 235

<210> 326  
<211> 18  
<212> PRT  
<213> Solanum tuberosum

<400> 326

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Pro Ser Glu His  
1 5 10 15

Ile Ser

<210> 327  
<211> 82  
<212> PRT  
<213> Solanum tuberosum

<400> 327

Met Asp Val Cys Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Phe Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Leu His Val Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 328

<211> 82

<212> PRT

<213> Solanum tuberosum

<400> 328

Met Asp Val Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Leu His Val Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 329

<211> 82

<212> PRT

<213> Solanum tuberosum

<400> 329

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Arg Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Phe His Val Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 330

<211> 82

<212> PRT

<213> Solanum tuberosum

<400> 330

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Leu His Val Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 331

<211> 82

<212> PRT

<213> Solanum tuberosum

<400> 331

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Ile Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Leu His Ala Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 332

<211> 59

<212> PRT

<213> Solanum tuberosum

<400> 332

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Tyr Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Ser Leu Leu Cys Ile Phe Phe Ser  
50 55

<210> 333

<211> 934

<212> PRT

<213> Pichia jadinii

<400> 333

Met Phe Tyr His Gly Ala Ser Ala Asn Gln His Trp Ile Ala Val Asp  
1 5 10 15

Asp Leu Ser Lys Val Pro Val Asp Val His Tyr Asn Val Val Pro  
20 25 30

Phe Gln Phe Arg Arg Ala Gly Glu Tyr Lys Glu Pro Val Leu Ser Gly  
35 . 40 45

Ile Val Glu Leu Asp Glu Val Lys Phe Val Val Ser Gln Ser Asp Ala  
50 55 60

Ala Glu Gln Trp Gln Gln Leu Thr Ala Glu Asp Gly Thr Val Trp Arg  
65 70 75 80

Ser Arg Ala Tyr His Gly Lys Leu Gly Lys Tyr Ser Asp Met Ala Val  
85 90 95

Gly Ala Phe Asn Lys Val Leu Asn Leu Val Arg Gly Ala Glu Thr Phe  
100 105 110

Asp Ile Ala Leu Val Thr Cys Ala Tyr Ile Ala Met Phe Tyr Thr Leu  
115 120 125

Phe Asn Leu Phe Ala Arg Met Arg Ala Val Gly Ser Lys Val Trp Leu  
130 135 140

Gly Leu Ser Thr Leu Val Ser Ser Phe Phe Ala Phe Leu Phe Ala Leu  
145 150 155 160

Tyr Ile Thr Thr Arg Val Leu Asp Leu Ser Ile Pro Phe Leu Ser Leu  
165 170 175

Ser Glu Gly Ile Pro Phe Phe Val Ala Val Val Gly Phe Asn Asn Lys  
180 185 190

Ile Leu Leu Ala Glu Lys Val Leu Gln Asn Gln Leu Asn Ala Gln Ser  
195 200 205

Ser Lys Asn Asp Ala Pro Thr Val Leu Tyr Gln Ala Leu Arg Glu Gln  
210 215 220

Gly Pro Leu Leu Leu Arg Asp His Leu Phe Met Ile Thr Ala Phe Leu  
225 230 235 240

Gly Cys Ser Phe Tyr Ala Ser Tyr Leu Asp Gly Leu Lys Asn Phe Cys  
245 250 255

Ile Leu Ala Ala Leu Ile Leu Ala Phe Asp Ile Leu Thr Thr Ser Thr  
260 265 270

Phe Leu Ser Ala Ile Leu Ser Leu Lys Leu Glu Ile Asn Gln Ile His  
275 280 285

Arg Ser Thr Leu Leu Arg Glu Gln Leu Glu Asp Asp Gly Leu Thr Glu  
290 295 300

Thr Thr Val Asp Asp Val Leu Lys Ser Asn Ser Leu Ala Gly Thr Lys  
305 310 315 320

Thr Phe Thr Asp Ala Pro Ser Thr Leu Val Thr Val Ala Lys Val Ala  
325 330 335

Gly Val Ser Val Phe Phe Gly Leu His Phe Tyr Gly Phe Gly Ser Ala  
340 345 350

Trp Leu Ser Asp Leu Ser Ala Gly Asn Glu Thr Asn Asp Thr Phe Thr  
355 360 365

Leu Tyr Asp Ala Val Ala Asp Gln Ile Pro Ile Gly Ser Asn Gly Thr  
370 375 380

Leu Val Thr Leu Phe Pro Thr Arg Phe Phe Leu Pro Glu Lys Leu Ser  
385 390 395 400

Thr Gln Ile Glu Ala Val Val Leu Ser Phe Ile Gly Leu Ile Ser Thr  
405 410 415

Ala Ala Arg Asp Lys Tyr Ile Ser Lys Phe Ile Leu Phe Ala Phe Ala  
420 425 430

Val Ser Ala Ser Ile Asn Val Tyr Leu Leu Asn Val Ala Arg Ile His  
435 440 445

Thr Thr Arg Leu Glu Asp Ala Ile Glu Leu Lys Lys Pro Lys Lys Lys  
450 455 460

Ala Ser Lys Thr Ala Val Ser Val Pro Lys Ala Val Val Val Lys Asp  
465 470 475 480

Ser Glu Thr Thr Lys Ser Ser Glu Ile Leu His Ser Ser Ser Glu Ser  
485 490 495

Glu Ser Glu Gln Ser Ser Arg Pro Leu Glu Gln Val Ile Glu Leu Tyr  
500 505 510

Lys Asp Gly Lys Val Lys Thr Leu Val Asp Asp Glu Val Val Ser Leu  
515 520 525

Val Thr Ala Gly Lys Leu Pro Leu Tyr Ala Leu Glu Lys Gln Leu Gly  
530 535 540

Asp Asn Leu Arg Ala Val Ala Ile Arg Arg Lys Ala Ile Ser Asp Leu  
545 550 555 560

Ala Asp Ala Pro Val Leu Arg Ser Asn Lys Leu Pro Tyr Leu His Tyr  
565 570 575

Asp Tyr Asp Arg Val Phe Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr  
580 585 590

Met Pro Leu Pro Val Gly Val Ala Gly Pro Leu Ile Ile Asp Gly Lys  
595 600 605

Pro Tyr His Ile Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser  
610 615 620

Ala Met Arg Gly Cys Lys Ala Ile Asn Leu Gly Gly Val Thr Thr  
625 630 635 640

Val Leu Thr Lys Asp Gly Met Thr Arg Gly Pro Cys Val Lys Phe Pro  
645 650 655

Ser Leu Lys Arg Ala Gly Gln Cys Lys Leu Trp Leu Asp Ser Asp Glu  
660 665 670

Gly Gln Glu Glu Met Lys Lys Ala Phe Asn Ser Thr Ser Arg Phe Ala  
675 680 685

Arg Leu Gln His Leu Gln Thr Ala Leu Ala Gly Asp Leu Leu Phe Ile  
690 695 700

Arg Phe Arg Thr Val Thr Gly Asp Ala Met Gly Met Asn Met Ile Ser  
705 710 715 720

Lys Gly Val Glu Tyr Ala Leu Lys Gln Met Thr Glu Val Phe Gly Trp  
725 730 735

Asp Asp Met Met Val Val Ser Val Ser Gly Asn Tyr Cys Thr Asp Lys

740

745

750

Lys Pro Ala Ala Val Asn Trp Ile Asn Gly Arg Gly Lys Ser Val Val  
755 760 765

Ala Glu Ala Ser Ile Pro Lys Asp Ala Val Val Lys Val Leu Lys Ser  
770 775 780

Ser Val Lys Ala Val Val Asp Val Asn Val Asn Lys Asn Leu Ile Gly  
785 790 795 800

Ser Ala Met Ala Gly Ser Val Gly Gly Phe Asn Ala Gln Ala Ala Asn  
805 810 815

Met Val Thr Ala Val Tyr Leu Ala Leu Gly Gln Asp Pro Ala Gln Asn  
820 825 830

Val Glu Ser Ser Asn Cys Ile Thr Leu Met Thr Glu Thr Glu Asp Gly  
835 840 845

Asp Leu Lys Val Ser Val Ser Met Pro Ser Ile Glu Val Gly Thr Ile  
850 855 860

Gly Gly Gly Thr Ile Leu Asp Pro Gln Gly Ser Met Leu Glu Leu Leu  
865 870 875 880

Gly Val Arg Gly Pro Ala Asp Val Pro Gly Glu Asn Ala Arg Gln Leu  
885 890 895

Ala Lys Ile Val Ala Ser Ile Val Leu Ser Gly Glu Leu Ser Leu Val  
900 905 910

Ser Ala Leu Ala Ala Gly His Leu Val Gln Ser His Met Gln His Asn  
915 920 925

Arg Ala Ala Ala Lys Lys  
930

<210> 334  
<211> 628  
<212> PRT  
<213> *Gossypium hirsutum*

<400> 334

Met Glu Ala Ser Arg Arg Ser Ala Val Lys Pro Val Ile Val Leu Lys  
1 5 10 15

Pro Ser Lys Arg Phe Pro Leu Val Glu Asp Thr Pro Gly Lys Ala Ser  
20 25 30

Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Ala Val Phe Phe Thr  
35 40 45

Leu Phe Phe Thr Val Val Tyr Phe Leu Leu Ser Arg Trp Arg Glu Lys  
50 55 60

Ile Arg Ala Ser Ile Pro Leu His Ala Val Thr Phe Pro Glu Ile Val  
65 70 75 80

Ala Ile Phe Ala Phe Val Ala Ser Leu Ile Tyr Leu Leu Gly Phe Phe  
85 90 95

Gly Ile Asp Phe Val Gln Ser Leu Ile Ile Arg Pro Ser Gly Asp Val  
100 105 110

Trp Ser Gly Glu Asp Tyr Glu Glu Glu Asn Glu Val Leu Leu His Glu  
115 120 125

Glu Asp Ala Arg Thr Val Pro Cys Gly Gln Ala Leu Asp Cys Ser Val  
130 135 140

Pro Ser Leu Pro His Met Ala Arg Asn Val Thr Ala Gln Arg Leu Phe  
145 150 155 160

Asp Glu Lys Pro Val Arg Val Ala Thr Glu Glu Asp Ala Arg Lys Val  
165 170 175

Ser Cys Gly Gln Ala Val Asp Cys Ser Leu His Ser Leu Pro Pro Arg  
180 185 190

Pro Pro Ile Val Thr Ser Gln Lys Leu Phe His Glu Lys Thr Val Ile  
195 200 205

Val Thr Thr Glu Glu Asp Glu Glu Ile Ile Lys Ser Val Val Ala Gly  
210 215 220

Thr Leu Pro Ser Tyr Ser Leu Glu Ser Lys Leu Gly Asp Cys Lys Arg  
225 230 235 240

Ala Ala Ala Ile Arg Arg Glu Ala Leu Gln Arg Leu Thr Gly Arg Ser  
245 250 255

Leu Ser Gly Leu Pro Leu Asp Gly Phe Asp Tyr Glu Ser Ile Leu Gly  
260 265 270

Gln Cys Cys Glu Met Pro Val Gly Tyr Val Gln Ile Pro Val Gly Ile  
275 280 285

Ala Gly Pro Leu Leu Leu Asn Gly Arg Glu Tyr Ser Val Pro Met Ala  
290 295 300

Thr Thr Glu Gly Cys Leu Val Ala Ser Thr Asn Arg Gly Cys Lys Ala  
305 310 315 320

Ile His Leu Ser Gly Gly Ala Thr Ser Ile Leu Leu Lys Asp Gly Met  
325 330 335

Thr Arg Ala Pro Val Val Arg Phe Ser Thr Ala Lys Arg Ala Ala Glu  
340 345 350

Leu Lys Phe Tyr Leu Glu Asp Pro Glu Asn Phe Asp Thr Leu Ala Val  
355 360 365

Val Phe Asn Arg Ser Ser Arg Phe Gly Arg Leu Gln Ser Ile Lys Cys  
370 375 380

Ala Ile Ala Gly Lys Asn Leu Tyr Leu Arg Phe Thr Cys Ser Thr Gly  
385 390 395 400

Asp Ala Met Gly Met Asn Met Val Ser Lys Gly Val Gln Asn Val Leu  
405 410 415

Asp Phe Leu Gln Thr Asp Phe Pro Asp Met Asp Val Ile Gly Ile Ser  
420 425 430

Gly Asn Phe Cys Ser Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu  
435 440 445

Gly Arg Gly Lys Ser Val Val Cys Glu Ala Ile Ile Glu Gly Asp Val  
450 455 460

Val Arg Lys Val Leu Lys Thr Ser Val Glu Ser Leu Val Glu Leu Asn  
465 470 475 480

Met Leu Lys Asn Leu Thr Gly Ser Ala Met Ala Gly Ala Leu Gly Gly  
485 490 495

Phe Asn Ala His Ala Ser Asn Ile Val Thr Ala Ile Tyr Ile Ala Thr

500

505

510

Gly Gln Asp Pro Ala Gln Asn Val Glu Ser Ser His Cys Ile Thr Met  
515 520 525

Met Glu Ala Val Asn Asp Gly Lys Asp Leu His Ile Ser Val Thr Met  
530 535 540

Pro Ser Ile Glu Val Gly Thr Val Gly Gly Thr Gln Leu Ala Ser  
545 550 555 560

Gln Ser Ala Cys Leu Asn Leu Leu Gly Val Lys Gly Ala Ser Lys Asp  
565 570 575

Val Ala Gly Ala Asn Ser Arg Met Leu Ala Thr Ile Val Thr Gly Ala  
580 585 590

Val Leu Ala Gly Glu Leu Ser Leu Met Ser Ala Leu Ala Ala Gly Gln  
595 600 605

Leu Val Lys Ser His Met Lys Tyr Asn Arg Ser Ser Lys Asp Met Ser  
610 615 620

Asn Leu Ser Ser  
625

<210> 335  
<211> 585  
<212> PRT  
<213> *Gossypium hirsutum*

<400> 335

Met Glu Thr His Arg Arg Ser Ser Thr Asn Ser Ile Arg Ser His Lys  
1 5 10 15

Pro Ala Arg Pro Ile Ala Leu Glu Asp Asp Ser Thr Lys Ala Ser Asp  
20 25 30

Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Ala Val Phe Phe Thr Leu  
35 40 45

Phe Phe Ser Ala Val Tyr Phe Leu Leu Cys Arg Trp Arg Glu Lys Ile  
50 55 60

Arg Ser Ser Thr Pro Leu His Val Val Thr Phe Ser Glu Ile Val Ala  
65 70 75 80

Ile Leu Ala Ser Val Ala Ser Phe Ile Tyr Leu Leu Gly Phe Phe Gly  
85 90 95

Ile Asp Phe Val Gln Ser Leu Val Leu Arg Pro Ser Ala Asp Val Trp  
100 105 110

Ala Thr Glu Asp Asp Glu Val Glu Ser Glu Val Leu Leu Arg Asn Glu  
115 120 125

Asp Ala Arg His Val Pro Cys Gly Gln Ala Leu Asp Arg Ser Ile Arg  
130 135 140

Ser Leu Gln Pro Pro Glu Pro Ile Val Thr Ala Glu Lys Val Phe Asp  
145 150 155 160

Glu Met Pro Val Thr Val Met Thr Glu Glu Asp Glu Glu Ile Ile Arg  
165 170 175

Ser Val Val Cys Gly Met Thr Pro Ser Tyr Ser Leu Glu Ser Lys Leu  
180 185 190

Asp Asp Cys Lys Arg Ala Ala Ile Arg Arg Glu Ala Leu Gln Arg  
195 200 205

Ile Thr Gly Lys Ser Leu Ser Gly Leu Pro Leu Asp Gly Phe Asp Tyr  
210 215 220

Glu Ser Ile Leu Gly Gln Cys Cys Glu Met Pro Val Gly Tyr Glu Gln  
225 230 235 240

Ile Pro Val Gly Ile Ala Gly Pro Leu Leu Leu Asn Gly Arg Glu Tyr  
245 250 255

Ser Val Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr Asn  
260 265 270

Arg Gly Cys Lys Ala Ile His Leu Ser Gly Gly Ala Thr Ser Val Leu  
275 280 285

Leu Arg Asp Gly Met Thr Arg Ala Pro Val Val Arg Phe Gly Thr Ala  
290 295 300

Lys Arg Ala Ala Asp Leu Lys Leu Tyr Leu Glu Asp Pro Glu Asn Phe  
305 310 315 320

Glu Thr Leu Ala Cys Val Phe Asn Arg Ser Ser Arg Phe Ala Arg Leu  
325 330 335

Gln Ser Ile Lys Cys Ala Ile Ala Gly Lys Asn Leu Tyr Leu Arg Phe  
340 345 350

Ser Cys Phe Thr Gly Asp Ala Met Gly Met Asn Met Val Ser Lys Gly  
355 360 365

Val Gln Asn Val Leu Asp Phe Leu Gln Thr Asp Phe Pro Asp Met Asp  
370 375 380

Val Ile Gly Ile Ser Gly Asn Phe Cys Ser Asp Lys Lys Pro Ala Ala  
385 390 395 400

Val Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala Ile  
405 410 415

Ile Asn Gly Asp Val Val Thr Lys Val Leu Lys Thr Ser Val Glu Ser  
420 425 430

Leu Val Glu Leu Asn Met Leu Lys Asn Leu Thr Gly Ser Ala Met Ala  
435 440 445

Gly Ala Leu Gly Gly Phe Asn Ala His Ala Ser Asn Ile Val Thr Ala  
450 455 460

Val Tyr Ile Ala Thr Gly Gln Asp Pro Ala Gln Asn Val Glu Ser Ser  
465 470 475 480

His Cys Ile Thr Met Met Glu Ala Val Asn Gly Gly Lys Asp Leu His  
485 490 495

Val Ser Val Thr Met Pro Ser Ile Glu Val Gly Thr Val Gly Gly Gly  
500 505 510

Thr Gln Leu Ala Ser Gln Ser Ala Cys Leu Asn Leu Leu Gly Val Lys  
515 520 525

Gly Ala Ser Lys Glu Ser Pro Gly Ala Asn Ser Ile Leu Leu Ala Thr  
530 535 540

Ile Val Ala Gly Ala Val Leu Ala Gly Glu Leu Ser Leu Met Ser Ala  
545 550 555 560

Leu Ala Ala Gly Gln Leu Val Lys Ser His Met Lys Tyr Asn Arg Ser

565

570

575

Ser Lys Asp Val Ser Lys Val Ser Ser  
580 585

<210> 336  
<211> 1045  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 336

Met Ser Leu Pro Leu Lys Thr Ile Val His Leu Val Lys Pro Phe Ala  
1 5 10 15

Cys Thr Ala Arg Phe Ser Ala Arg Tyr Pro Ile His Val Ile Val Val  
20 25 30

Ala Val Leu Leu Ser Ala Ala Tyr Leu Ser Val Thr Gln Ser Tyr  
35 40 45

Leu Asn Glu Trp Lys Leu Asp Ser Asn Gln Tyr Ser Thr Tyr Leu Ser  
50 55 60

Ile Lys Pro Asp Glu Leu Phe Glu Lys Cys Thr His Tyr Tyr Arg Ser  
65 70 75 80

Pro Val Ser Asp Thr Trp Lys Leu Leu Ser Ser Lys Glu Ala Ala Asp  
85 90 95

Ile Tyr Thr Pro Phe His Tyr Tyr Leu Ser Thr Ile Ser Phe Gln Ser  
100 105 110

Lys Asp Asn Ser Thr Thr Leu Pro Ser Leu Asp Asp Val Ile Tyr Ser  
115 120 125

Val Asp His Thr Arg Tyr Leu Leu Ser Glu Glu Pro Lys Ile Pro Thr  
130 135 140

Glu Leu Val Ser Glu Asn Gly Thr Lys Trp Arg Leu Arg Asn Asn Ser  
145 150 155 160

Asn Phe Ile Leu Asp Leu His Asn Ile Tyr Arg Asn Met Val Lys Gln  
165 170 175

Phe Ser Asn Lys Thr Ser Glu Phe Asp Gln Phe Asp Leu Phe Ile Ile  
180 185 190

Leu Ala Ala Tyr Leu Thr Leu Phe Tyr Thr Leu Cys Cys Leu Phe Asn  
195 200 205

Asp Met Arg Lys Ile Gly Ser Lys Phe Trp Leu Ser Phe Ser Ala Leu  
210 215 220

Ser Asn Ser Ala Cys Ala Leu Tyr Leu Ser Leu Tyr Thr Thr His Ser  
225 230 235 240

Leu Leu Lys Lys Pro Ala Ser Leu Leu Ser Leu Val Ile Gly Leu Pro  
245 250 255

Phe Ile Val Val Ile Ile Gly Phe Lys His Lys Val Arg Leu Ala Ala  
260 265 270

Phe Ser Leu Gln Lys Phe His Arg Ile Ser Ile Asp Lys Lys Ile Thr  
275 280 285

Val Ser Asn Ile Ile Tyr Glu Ala Met Phe Gln Glu Gly Ala Tyr Leu  
290 295 300

Ile Arg Asp Tyr Leu Phe Tyr Ile Ser Ser Phe Ile Gly Cys Ala Ile  
305 310 315 320

Tyr Ala Arg His Leu Pro Gly Leu Val Asn Phe Cys Ile Leu Ser Thr  
325 330 335

Phe Met Leu Val Phe Asp Leu Leu Leu Ser Ala Thr Phe Tyr Ser Ala  
340 345 350

Ile Leu Ser Met Lys Leu Glu Ile Asn Ile Ile His Arg Ser Thr Val  
355 360 365

Ile Arg Gln Thr Leu Glu Glu Asp Gly Val Val Pro Thr Thr Ala Asp  
370 375 380

Ile Ile Tyr Lys Asp Glu Thr Ala Ser Glu Pro His Phe Leu Arg Ser  
385 390 395 400

Asn Val Ala Ile Ile Leu Gly Lys Ala Ser Val Ile Gly Leu Leu Leu  
405 410 415

Leu Ile Asn Leu Tyr Val Phe Thr Asp Lys Leu Asn Ala Thr Ile Leu  
420 425 430

Asn Thr Val Tyr Phe Asp Ser Thr Ile Tyr Ser Leu Pro Asn Phe Ile  
435 440 445

Asn Tyr Lys Asp Ile Gly Asn Leu Ser Asn Gln Val Ile Ile Ser Val  
450 455 460

Leu Pro Lys Gln Tyr Tyr Thr Pro Leu Lys Lys Tyr His Gln Ile Glu  
465 470 475 480

Asp Ser Val Leu Ile Ile Asp Ser Val Ser Asn Ala Ile Arg Asp  
485 490 495

Gln Phe Ile Ser Lys Leu Leu Phe Phe Ala Phe Ala Val Ser Ile Ser  
500 505 510

Ile Asn Val Tyr Leu Leu Asn Ala Ala Lys Ile His Thr Gly Tyr Met  
515 520 525

Asn Phe Gln Pro Gln Ser Asn Lys Ile Asp Asp Leu Val Val Gln Gln  
530 535 540

Lys Ser Ala Thr Ile Glu Phe Ser Glu Thr Arg Ser Met Pro Ala Ser  
545 550 555 560

Ser Gly Leu Glu Thr Pro Val Thr Ala Lys Asp Ile Ile Ile Ser Glu  
565 570 575

Glu Ile Gln Asn Asn Glu Cys Val Tyr Ala Leu Ser Ser Gln Asp Glu  
580 585 590

Pro Ile Arg Pro Leu Ser Asn Leu Val Glu Leu Met Glu Lys Glu Gln  
595 600 605

Leu Lys Asn Met Asn Asn Thr Glu Val Ser Asn Leu Val Val Asn Gly  
610 615 620

Lys Leu Pro Leu Tyr Ser Leu Glu Lys Lys Leu Glu Asp Thr Thr Arg  
625 630 635 640

Ala Val Leu Val Arg Arg Lys Ala Leu Ser Thr Leu Ala Glu Ser Pro  
645 650 655

Ile Leu Val Ser Glu Lys Leu Pro Phe Arg Asn Tyr Asp Tyr Asp Arg  
660 665 670

Val Phe Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr Met Pro Ile Pro

675

680

685

Val Gly Val Ile Gly Pro Leu Ile Ile Asp Gly Thr Ser Tyr His Ile  
690 695 700

Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Ala Met Arg Gly  
705 710 715 720

Cys Lys Ala Ile Asn Ala Gly Gly Ala Thr Thr Val Leu Thr Lys  
725 730 735

Asp Gly Met Thr Arg Gly Pro Val Val Arg Phe Pro Thr Leu Ile Arg  
740 745 750

Ser Gly Ala Cys Lys Ile Trp Leu Asp Ser Glu Glu Gly Gln Asn Ser  
755 760 765

Ile Lys Lys Ala Phe Asn Ser Thr Ser Arg Phe Ala Arg Leu Gln His  
770 775 780

Ile Gln Thr Cys Leu Ala Gly Asp Leu Leu Phe Met Arg Phe Arg Thr  
785 790 795 800

Thr Thr Gly Asp Ala Met Gly Met Asn Met Ile Ser Lys Gly Val Glu  
805 810 815

Tyr Ser Leu Lys Gln Met Val Glu Glu Tyr Gly Trp Glu Asp Met Glu  
820 825 830

Val Val Ser Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys Pro Ala Ala  
835 840 845

Ile Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Ala Glu Ala Thr  
850 855 860

Ile Pro Gly Asp Val Val Lys Ser Val Leu Lys Ser Asp Val Ser Ala  
865 870 875 880

Leu Val Glu Leu Asn Ile Ser Lys Asn Leu Val Gly Ser Ala Met Ala  
885 890 895

Gly Ser Val Gly Gly Phe Asn Ala His Ala Ala Asn Leu Val Thr Ala  
900 905 910

Leu Phe Leu Ala Leu Gly Gln Asp Pro Ala Gln Asn Val Glu Ser Ser  
915 920 925

Asn Cys Ile Thr Leu Met Lys Glu Val Asp Gly Asp Leu Arg Ile Ser  
930 935 940

Val Ser Met Pro Ser Ile Glu Val Gly Thr Ile Gly Gly Gly Thr Val  
945 950 955 960

Leu Glu Pro Gln Gly Ala Met Leu Asp Leu Leu Gly Val Arg Gly Pro  
965 970 975

His Pro Thr Glu Pro Gly Ala Asn Ala Arg Gln Leu Ala Arg Ile Ile  
980 985 990

Ala Cys Ala Val Leu Ala Gly Glu Leu Ser Leu Cys Ser Ala Leu Ala  
995 1000 1005

Ala Gly His Leu Val Gln Ser His Met Thr His Asn Arg Lys Thr  
1010 1015 1020

Asn Lys Ala Asn Glu Leu Pro Gln Pro Ser Asn Lys Gly Pro Pro  
1025 1030 1035

Cys Lys Thr Ser Ala Leu Leu  
1040 1045

<210> 337  
<211> 574  
<212> PRT  
<213> Solanum tuberosum

<400> 337

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Pro Ser Glu His  
1 5 10 15

Ile Ser Ser Gly Glu Pro Leu Lys Pro His Asn Gln Asp Ser Ser Val  
20 25 30

Lys Ala Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Gly Leu  
35 40 45

Phe Phe Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu His Arg Trp  
50 55 60

Arg Glu Lys Ile Arg Asn Gly Ile Pro Leu His Val Leu Asn Phe Ser  
65 70 75 80

Glu Leu Val Ala Met Val Ser Leu Ile Ala Ser Val Ile Tyr Leu Leu  
85 90 95

Gly Phe Phe Gly Ile Gly Phe Val Gln Ser Phe Val Ser Lys Gly Asn  
100 105 110

Asn Asp Ser Trp Asp Val Glu Asp Glu Ser Pro Glu Gln Phe Ile Asp  
115 120 125

Arg Thr Val Thr Pro Pro Pro Val Arg Arg Asn Ile Pro Met Lys Ser  
130 135 140

Val Pro Val Ala Glu Lys Thr Ala Gln Ile Ile Thr Pro Phe Ser Ser  
145 150 155 160

Glu Asp Asp Glu Val Val Ile Lys Ser Val Val Glu Gly Arg Ile Pro  
165 170 175

Ser Tyr Ser Leu Glu Ser Lys Leu Gly Asp Cys Lys Arg Ala Ala Phe  
180 185 190

Ile Arg Lys Glu Ala Leu Gln Arg Ser Ser Gly Lys Ser Leu Glu Gly  
195 200 205

Leu Pro Leu Asp Gly Phe Asp Tyr Glu Ser Ile Leu Gly Gln Cys Cys  
210 215 220

Glu Met Pro Ile Gly Tyr Ile Gln Ile Pro Val Gly Ile Ala Gly Pro  
225 230 235 240

Leu Leu Leu Asn Gly Lys Glu Phe Ser Val Pro Met Ala Thr Thr Glu  
245 250 255

Gly Cys Leu Val Ala Ser Thr Asn Arg Gly Cys Lys Ala Ile Tyr Val  
260 265 270

Ser Gly Gly Ala Thr Ser Val Leu Phe Arg Asp Ala Met Thr Arg Ala  
275 280 285

Pro Val Val Arg Phe Gly Ser Ala Lys Arg Ala Ala Glu Leu Lys Phe  
290 295 300

Phe Val Glu Asp Pro Met Asn Phe Glu Thr Leu Ser Val Val Phe Asn  
305 310 315 320

Lys Ser Ser Arg Phe Ala Arg Leu Gln Asn Ile Gln Cys Ala Ile Ala

325

330

335

Gly Lys Asn Leu Tyr Met Arg Phe Ser Cys Ser Thr Gly Asp Ala Met  
340 345 350

Gly Met Asn Met Val Ser Lys Gly Val Gln Asn Val Leu Asp Tyr Leu  
355 360 365

Gln Asn Glu Tyr Pro Asp Met Asp Ile Ile Gly Ile Ser Gly Asn Tyr  
370 375 380

Cys Ser Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly  
385 390 395 400

Lys Ser Val Val Cys Glu Ala Ile Ile Lys Glu Asp Val Val Lys Lys  
405 410 415

Val Leu Lys Thr Glu Val Ala Thr Leu Val Glu Leu Asn Met Leu Lys  
420 425 430

Asn Leu Thr Gly Ser Ala Met Ala Gly Ala Leu Gly Gly Phe Asn Ala  
435 440 445

His Ala Ser Asn Ile Val Ser Ala Val Tyr Leu Ala Thr Gly Gln Asp  
450 455 460

Pro Ala Gln Asn Ile Glu Ser Ser His Cys Ile Thr Met Met Glu Ala  
465 470 475 480

Val Asn Asp Gly Lys Asp Leu His Ile Ser Val Thr Met Pro Ser Ile  
485 490 495

Glu Val Gly Thr Val Gly Gly Thr Gln Leu Ala Ser Gln Ser Ala  
500 505 510

Cys Leu Asn Leu Leu Gly Val Lys Gly Ala Asn Arg Glu Ala Pro Gly  
515 520 525

Ser Asn Ala Arg Leu Leu Ala Thr Ile Val Ala Gly Ser Val Leu Ala  
530 535 540

Gly Glu Leu Ser Leu Met Ser Ala Ile Ser Ala Gly Gln Leu Val Lys  
545 550 555 560

Ser His Met Lys Tyr Asn Arg Ser Cys Lys Asp Val Thr Lys  
565 570

<210> 338  
<211> 595  
<212> PRT  
<213> Solanum tuberosum

<400> 338

Met Asp Val Arg Arg Ser Glu Lys Pro Val Tyr Pro Ser Lys Val  
1 5 10 15

Phe Gly Ala Asp Glu Lys Pro Leu Lys Pro His Asn Asn Gln Gln Gln  
20 25 30

Glu Asp Asn Asn Thr Leu Leu Ile Asp Ala Ser Asp Ala Leu Pro Leu  
35 40 45

Pro Leu Tyr Leu Thr Asn Gly Leu Phe Phe Thr Met Phe Phe Ser Val  
50 55 60

Met Tyr Phe Leu Leu Ser Arg Trp Arg Glu Lys Ile Arg Asn Ser Thr  
65 70 75 80

Pro Leu His Val Val Thr Leu Ser Glu Leu Gly Ala Ile Val Ser Leu  
85 90 95

Ile Ala Ser Val Ile Tyr Leu Leu Gly Phe Phe Gly Ile Gly Phe Val  
100 105 110

Gln Thr Phe Val Ser Arg Gly Asn Asn Asp Ser Trp Asp Glu Asn Asp  
115 120 125

Glu Glu Phe Leu Leu Lys Glu Asp Ser Arg Cys Gly Pro Ala Thr Thr  
130 135 140

Leu Gly Cys Ala Ile Pro Ala Pro Pro Ala Arg Gln Ile Ser Pro Met  
145 150 155 160

Ala Pro Pro Gln Pro Ala Met Ser Met Val Glu Lys Pro Ser Pro Leu  
165 170 175

Ile Thr Pro Ala Ser Ser Glu Glu Asp Glu Glu Ile Ile Asn Ser Val  
180 185 190

Val Gln Gly Lys Phe Pro Ser Tyr Ser Leu Val Ile Gln Leu Gly Asp  
195 200 205

Val Ser Ala Ala Ala Ser Leu Arg Lys Glu Val Met Gln Arg Ile Thr  
210 215 220

Gly Lys Ser Leu Glu Gly Leu Pro Leu Glu Gly Phe Thr Tyr Glu Ser  
225 230 235 240

Ile Leu Gly Gln Cys Cys Glu Met Pro Ile Gly Tyr Val Gln Ile Pro  
245 250 255

Val Gly Ile Ala Gly Pro Leu Leu Asn Gly Lys Glu Phe Ser Val  
260 265 270

Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr Asn Arg Gly  
275 280 285

Cys Lys Ala Ile Tyr Ala Ser Gly Gly Ala Thr Cys Ile Val Leu Arg  
290 295 300

Asp Gly Met Thr Arg Ala Pro Cys Val Arg Phe Gly Thr Ala Lys Arg  
305 310 315 320

Ala Ala Glu Leu Lys Phe Phe Val Glu Asp Pro Ile Lys Phe Glu Thr  
325 330 335

Leu Ala Asn Val Phe Asn Gln Ser Ser Arg Phe Gly Arg Leu Gln Arg  
340 345 350

Ile Gln Cys Ala Ile Ala Gly Lys Asn Leu Tyr Met Arg Phe Val Cys  
355 360 365

Ser Thr Gly Asp Ala Met Gly Met Asn Met Val Ser Lys Gly Val Gln  
370 375 380

Asn Val Leu Asp Tyr Leu Gln Asn Glu Tyr Pro Asp Met Asp Val Ile  
385 390 395 ^ 400

Gly Ile Ser Gly Asn Phe Cys Ser Asp Lys Lys Pro Ala Ala Val Asn  
405 410 415

Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala Ile Ile Thr  
420 425 430

Glu Glu Val Val Lys Lys Val Leu Lys Thr Glu Val Ala Ala Leu Val  
435 440 445

Glu Leu Asn Met Leu Lys Asn Leu Thr Gly Ser Ala Met Ala Gly Ala

450

455

460

Leu Gly Gly Phe Asn Ala His Ala Ser Asn Ile Val Ser Ala Val Phe  
465 470 475 480

Ile Ala Thr Gly Gln Asp Pro Ala Gln Asn Ile Glu Ser Ser His Cys  
485 490 495

Ile Thr Met Met Glu Ala Val Asn Asp Gly Lys Asp Leu His Ile Ser  
500 505 510

Val Thr Met Pro Ser Ile Glu Val Gly Thr Val Gly Gly Thr Gln  
515 520 525

Leu Ala Ser Gln Ser Ala Cys Leu Asn Leu Leu Gly Val Lys Gly Ala  
530 535 540

Asn Arg Glu Ala Pro Gly Ser Asn Ala Arg Leu Leu Ala Thr Val Val  
545 550 555 560

Ala Gly Ser Val Leu Ala Gly Glu Leu Ser Leu Met Ser Ala Ile Ser  
565 570 575

Ala Gly Gln Leu Val Asn Ser His Met Lys Tyr Asn Arg Ser Thr Lys  
580 585 590

Ala Ser Ser  
595

<210> 339  
<211> 1053  
<212> PRT  
<213> Schizosaccharomyces pombe

<400> 339

Met Ile Tyr Lys Leu Ala Ala Arg Tyr Pro Ile Gln Val Ile Ala Ile  
1 5 10 15

Val Gly Ile Leu Val Ser Met Ala Tyr Phe Ser Phe Leu Glu Ala Leu  
20 25 30

Thr Gln Glu Asp Phe Pro Val Leu Ile Arg Ala Leu Lys Arg Phe Gly  
35 40 45

Ile Leu Asp Gly Phe Pro Asn Thr Arg Leu Pro Asn Glu Met Ile Leu  
50 55 60

Lys Leu Ser Ser Val Gln Gly Glu Asp Ala Ser Val Trp Glu Gln Ile  
65 70 75 80

Pro Ala Ala Glu Leu Gly Gly Glu Gly Phe Val Asp Phe Asp Ile Thr  
85 90 95

Gln Trp Tyr Tyr Pro Ala Asn Ala Lys Val Asp Val Ala Gln Leu Val  
100 105 110

Glu Pro Tyr Arg Asn Asp Cys Ile Phe His Asp Ala Ser Gly Ala Cys  
115 120 125

His Phe Phe Phe Lys Glu Val Gly Asn Trp Thr Val Ser Ser Ile Ala  
130 135 140

Leu Pro Ser Asn Leu Ala Asn Pro Pro Ile Asp Tyr Phe Leu Asp Ser  
145 150 155 160

Ser Ser Thr Val Ile Gln Arg Ile Leu Pro Ala Ile Arg Glu His Gly  
165 170 175

Ile Ser Trp Ser Trp Leu Leu Gln Leu Ile Ala Arg Thr Trp Met Asn  
180 185 190

Thr Leu Lys Ile Ala Ser Gln Ala Ser Lys Thr Glu Leu Leu Ile Val  
195 200 205

Gly Thr Ala Tyr Ala Cys Met Leu Ile Ser Ile Val Ser Leu Tyr Leu  
210 215 220

Lys Met Arg Arg Leu Gly Ser Lys Phe Trp Leu Phe Phe Ser Val Leu  
225 230 235 240

Leu Ser Thr Leu Phe Ser Val Gln Phe Ala Met Thr Leu Val Arg Ala  
245 250 255

Ser Gly Val Arg Ile Ser Leu Val Ser Leu Ile Glu Ser Leu Pro Phe  
260 265 270

Leu Ile Asn Val Val Ala Leu Asp Lys Ala Ala Glu Leu Thr Arg Gln  
275 280 285

Val Ile Thr Arg Cys Ser Val Ser Asp Ser His Ser Pro Met His Glu  
290 295 300

Asp Ile Ala Lys Ala Cys Arg Asn Ala Ala Pro Pro Ile Leu Arg His  
305 310 315 320

Phe Ser Phe Gly Ile Val Val Leu Ala Ile Phe Ser Tyr Cys Asn Phe  
325 330 335

Gly Ile Lys Gln Phe Phe Leu Phe Ala Ala Val Met Ile Tyr Asp Leu  
340 345 350

Leu Leu Leu Phe Ser Phe Phe Val Ala Ile Leu Thr Leu Lys Leu Glu  
355 360 365

Met Arg Arg Tyr Asn Ala Lys Asp Asp Val Arg Lys Val Leu Ile Glu  
370 375 380

Glu Gly Leu Ser Glu Ser Thr Ala Arg His Val Ala Asp Gly Asn Asp  
385 390 395 400

Ser Ser Ala Thr Thr Ser Ala Gly Ser Arg Tyr Phe Lys Val Arg Tyr  
405 410 415

Gly Thr Lys Ile Ile Leu Phe Ile Phe Ile Ala Phe Asn Leu Phe Glu  
420 425 430

Leu Cys Ser Ile Pro Phe Lys His Tyr Ala Ala Thr Ser Ala Ala Ala  
435 440 445

Ala Arg Leu Ile Pro Leu Val Arg Ser Gln Tyr Pro Asp Phe Lys Ser  
450 455 460

Gln Arg Leu Leu Asp Asp Gly Val Phe Asp Asp Val Leu Ser Ala Ile  
465 470 475 480

Ser Ser Met Ser Asn Ile Glu Ser Pro Ser Val Arg Leu Leu Pro Ala  
485 490 495

Val Phe Tyr Gly Ala Glu Leu Ser Ser Thr Ser Phe Leu Ser Thr Ile  
500 505 510

His Ser Phe Ile Asn Asn Trp Ser His Tyr Ile Ser Ala Ser Phe Leu  
515 520 525

Ser Lys Trp Ile Val Cys Ala Leu Ser Leu Ser Ile Ala Val Asn Val  
530 535 540

Phe Leu Leu Asn Ala Ala Arg Leu Asn Ser Ile Lys Glu Glu Pro Glu

545

550

555

560

Lys Lys Val Val Glu Lys Val Val Glu Val Val Lys Tyr Ile Pro Ser  
565 570 575

Ser Asn Ser Ser Ser Ile Asp Asp Ile Gln Lys Asp Glu Ile Ala Gln  
580 585 590

Glu Ser Val Val Arg Ser Leu Glu Glu Cys Ile Thr Leu Tyr Asn Asn  
595 600 605

Gly Gln Ile Ser Thr Leu Asn Asp Glu Glu Val Val Gln Leu Thr Leu  
610 615 620

Ala Lys Lys Ile Pro Leu Tyr Ala Leu Glu Arg Val Leu Lys Asp Val  
625 630 635 640

Thr Arg Ala Val Val Ile Arg Arg Thr Val Val Ser Arg Ser Ser Arg  
645 650 655

Thr Lys Thr Leu Glu Ser Ser Asn Cys Pro Val Tyr His Tyr Asp Tyr  
660 665 670

Ser Arg Val Leu Asn Ala Cys Cys Glu Asn Val Ile Gly Tyr Met Pro  
675 680 685

Leu Pro Leu Gly Val Ala Gly Pro Leu Ile Ile Asp Gly Lys Pro Phe  
690 695 700

Tyr Ile Pro Met Ala Thr Thr Glu Gly Ala Leu Val Ala Ser Thr Met  
705 710 715 720

Arg Gly Cys Lys Ala Ile Asn Ala Gly Gly Gly Ala Val Thr Val Leu  
725 730 735

Thr Arg Asp Gln Met Ser Arg Gly Pro Cys Val Ala Phe Pro Asp Leu  
740 745 750

Thr Arg Ala Gly Arg Ala Lys Ile Trp Leu Asp Ser Pro Glu Gly Gln  
755 760 765

Glu Val Met Lys Lys Ala Phe Asn Ser Thr Ser Arg Phe Ala Arg Leu  
770 775 780

Gln His Ile Lys Thr Ala Leu Ala Gly Thr Arg Leu Phe Ile Arg Phe  
785 790 795 800

Cys Thr Ser Thr Gly Asp Ala Met Gly Met Asn Met Ile Ser Lys Gly  
805 810 815

Val Glu His Ala Leu Val Val Met Ser Asn Asp Ala Gly Phe Asp Asp  
820 825 830

Met Gln Val Ile Ser Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys Pro  
835 840 845

Ala Ala Ile Asn Trp Ile Asp Gly Arg Gly Lys Ser Val Ile Ala Glu  
850 855 860

Ala Ile Ile Pro Gly Asp Ala Val Lys Ser Val Leu Lys Thr Thr Val  
865 870 875 880

Glu Asp Leu Val Lys Leu Asn Val Asp Lys Asn Leu Ile Gly Ser Ala  
885 890 895

Met Ala Gly Ser Val Gly Gly Phe Asn Ala His Ala Asn Ile Val  
900 905 910

Thr Ala Val Tyr Leu Ala Thr Gly Gln Asp Pro Ala Gln Asn Val Glu  
915 920 925

Ser Ser Asn Cys Ile Thr Leu Met Asp Asn Val Asp Gly Asn Leu Gln  
930 935 940

Leu Ser Val Ser Met Pro Ser Ile Glu Val Gly Thr Ile Gly Gly Gly  
945 950 955 960

Thr Val Leu Glu Pro Gln Gly Ala Met Leu Asp Leu Leu Gly Val Arg  
965 970 975

Gly Ala His Met Thr Ser Pro Gly Asp Asn Ser Arg Gln Leu Ala Arg  
980 985 990

Val Val Ala Ala Ala Val Met Ala Gly Glu Leu Ser Leu Cys Ser Ala  
995 1000 1005

Leu Ala Ser Gly His Leu Val Lys Ser His Ile Gly Leu Asn Arg  
1010 1015 1020

Ser Ala Leu Asn Thr Pro Ala Met Asp Ser Ser Ala Lys Lys Pro  
1025 1030 1035

Ala Thr Asp Ala Leu Lys Ser Val Asn Ser Arg Val Pro Gly Arg  
1040 1045 1050

<210> 340  
<211> 856  
<212> PRT  
<213> Blattella germanica

<400> 340

Met Val Gly Arg Leu Phe Arg Ala His Gly Gln Phe Cys Ala Ser His  
1 5 10 15

Pro Trp Glu Val Ile Val Ala Thr Leu Thr Leu Thr Val Cys Met Leu  
20 25 30

Thr Val Asp Gln Arg Pro Leu Gly Leu Pro Pro Gly Trp Gly His Asn  
35 40 45

Cys Ile Thr Leu Glu Glu Tyr Asn Ala Ala Asp Met Ile Val Met Thr  
50 55 60

Leu Ile Arg Cys Val Ala Val Leu Tyr Ser Tyr Tyr Gln Phe Cys His  
65 70 75 80

Leu Gln Lys Leu Gly Ser Lys Tyr Ile Leu Gly Ile Ala Gly Leu Phe  
85 90 95

Thr Val Phe Ser Ser Phe Val Phe Ser Ser Ser Val Ile Asn Phe Leu  
100 105 110

Gly Ser Asp Val Ser Asp Leu Lys Asp Ala Leu Phe Phe Phe Leu Leu  
115 120 125

Leu Ile Asp Leu Ser Lys Ala Thr Val Leu Ala Gln Phe Ala Leu Ser  
130 135 140

Ser Arg Ser Gln Asp Glu Val Lys His Asn Ile Ala Arg Gly Ile Ala  
145 150 155 160

Met Leu Gly Pro Thr Ile Thr Leu Asp Thr Val Val Glu Thr Leu Val  
165 170 175

Ile Gly Val Gly Met Leu Ser Gly Val Arg Arg Leu Glu Val Leu Cys  
180 185 190

Cys Phe Ala Cys Met Ser Val Ile Val Asn Tyr Val Val Phe Met Thr

195

200

205

Phe Tyr Pro Ala Cys Leu Ser Leu Ile Leu Glu Leu Ser Arg Ser Gly  
210 215 220

Glu Ser Gly Arg Pro Ala Trp His Asp Lys Ser Leu Ile Ile Lys Ala  
225 230 235 240

Leu His Glu Glu Asp Gln Lys Pro Asn Pro Val Val Gln Arg Val Lys  
245 250 255

Val Ile Met Ser Ala Gly Leu Met Leu Val His Ala His Arg Trp Val  
260 265 270

Arg Cys Leu Ser Ile Ala Leu Trp Pro Asp Leu Thr Ser Leu Arg Tyr  
275 280 285

Phe Cys Thr His Cys Asp Thr Gly Val Ser Tyr Ser Arg Trp Ser Phe  
290 295 300

Ala Ser Glu Gly Glu Glu Leu Pro Thr Val Lys Leu Val Thr Gly Asp  
305 310 315 320

Ser Val Val Asn Ser Asn Ser Thr Asp Asp Ala Gln Leu His Tyr Tyr  
325 330 335

Ile Met Arg Trp Leu Thr Val Ser Ala Asp His Ile Val Ile Leu Ile  
340 345 350

Leu Leu Leu Ala Leu Ala Val Lys Phe Val Phe Phe Glu Thr Arg Asp  
355 360 365

Glu Leu Thr Thr Arg Gly Met Asp Gly Trp Val Glu Val Ser Ser  
370 375 380

Pro Val Glu His Lys Tyr Val Gln Thr Glu Gln Pro Ser Cys Ser Ala  
385 390 395 400

Pro Glu Gln Pro Leu Glu Glu Pro Pro Ala Ser Asn Arg Ser Ile Asp  
405 410 415

Glu Cys Leu Ser Val Cys Lys Ser Asp Val Gly Ala Gln Ala Leu Ser  
420 425 430

Asp Cys Glu Val Met Ala Leu Val Thr Ser Gly His Ile Ala Gly Tyr  
435 440 445

Gln Leu Glu Lys Val Val Arg Asn Pro Glu Arg Gly Val Gly Ile Arg  
450 455 460

Arg Gln Ile Leu Thr Lys Thr Ala Asp Leu Lys Asp Ala Leu Asp Asn  
465 470 475 480

Leu Pro Tyr Lys Asn Tyr Asp Tyr Leu Lys Val Met Gly Ala Cys Cys  
485 490 495

Glu Asn Val Ile Gly Tyr Met Pro Val Pro Val Gly Val Ala Gly Pro  
500 505 510

Leu Asn Leu Asp Gly Arg Leu Val His Val Pro Leu Ala Thr Thr Glu  
515 520 525

Gly Cys Leu Val Ala Ser Thr Asn Arg Gly Met Arg Ala Leu Met Arg  
530 535 540

Cys Gly Val Thr Ser Arg Ile Val Ala Asp Gly Met Thr Arg Gly Pro  
545 550 555 560

Val Val Arg Phe Pro Asn Ile Asp Arg Ala Ser Glu Ala Met Leu Trp  
565 570 575

Met Gln Val Pro Tyr Asn Phe Glu Gln Ile Lys Lys Asn Phe Asp Ser  
580 585 590

Thr Ser Arg Phe Ala Arg Leu Ser Lys Ile His Ile Arg Val Ala Gly  
595 600 605

Arg His Leu Phe Ile Arg Phe Ile Ala Thr Thr Gly Asp Ala Met Gly  
610 615 620

Met Asn Met Leu Ser Lys Gly Thr Glu Val Ala Leu Ala Tyr Val Gln  
625 630 635 640

Gln Val Tyr Pro Asp Met Glu Ile Leu Ser Leu Ser Gly Asn Phe Cys  
645 650 655

Thr Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly Lys  
660 665 670

Ser Val Val Cys Glu Ala Ile Val Pro Ala Asp Ile Ile Lys Ser Val  
675 680 685

Leu Lys Thr Ser Val Gln Ala Leu Met Asp Val Asn Ile Thr Lys Asn  
690 695 700

Leu Ile Gly Ser Ala Val Ala Gly Ser Ile Gly Gly Phe Asn Ala His  
705 710 715 720

Ala Ala Asn Ile Val Thr Ala Ile Phe Ile Ala Thr Gly Gln Asp Pro  
725 730 735

Ala Gln Asn Val Gly Ser Ser Asn Cys Met Thr Leu Met Glu Pro Trp  
740 745 750

Gly Glu Asp Gly Lys Asp Leu Tyr Val Ser Cys Thr Met Pro Ser Ile  
755 760 765

Glu Ile Gly Thr Ile Gly Gly Thr Val Leu Pro Pro Gln Ala Ala  
770 775 780

Cys Leu Asp Met Leu Gly Val Arg Gly Ala Asn Glu Met Cys Pro Gly  
785 790 795 800

Glu Asn Ala Asn Thr Leu Ala Arg Ile Val Cys Gly Thr Val Leu Ala  
805 810 815

Gly Glu Leu Ser Leu Met Ser Ala Leu Ala Ala Gly His Leu Val Lys  
820 825 830

Ser His Met Arg His Asn Arg Ser Ser Val Ser Thr Ser Gly Ser Glu  
835 840 845

Pro Ser Thr Pro Ala Cys Lys Ser  
850 855

<210> 341

<211> 59

<212> PRT

<213> Solanum tuberosum

<400> 341

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Tyr Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe

35

40

45

Thr Met Phe Ser Leu Leu Cys Ile Phe Phe Ser  
50 55

<210> 342  
<211> 82  
<212> PRT  
<213> Solanum tuberosum

<400> 342

Met Asp Val Cys Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Phe Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Leu His Val Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 343  
<211> 82  
<212> PRT  
<213> Solanum tuberosum

<400> 343

Met Asp Val Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Leu His Val Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 344  
<211> 82  
<212> PRT  
<213> Solanum tuberosum

<400> 344

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Arg Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Phe His Val Val Thr Leu Ser Glu Leu  
65 70 75 80

Leu Ala

<210> 345  
<211> 82  
<212> PRT  
<213> Solanum tuberosum

<400> 345

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20 25 30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35 40 45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg Glu  
50 55 60

Lys Ile Arg Asn Ser Ile Pro Leu His Val Val Thr Leu Ser Glu Leu  
65                    70                    75                    80

Leu Ala

<210> 346  
<211> 82  
<212> PRT  
<213> Solanum tuberosum

<400> 346

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp  
1                    5                    10                    15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys Ala  
20                    25                    30

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Thr Gly Leu Phe Phe  
35                    40                    45

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Ile Arg Trp Arg Glu  
50                    55                    60

Lys Ile Arg Asn Ser Ile Pro Leu His Ala Val Thr Leu Ser Glu Leu  
65                    70                    75                    80

Leu Ala

<210> 347  
<211> 277  
<212> PRT  
<213> Sphaceloma manihotica

<400> 347

Met Ala Ala Gly Phe Pro Gly Tyr Ala Leu Glu Lys Thr Leu Glu Asp  
1                    5                    10                    15

Lys Thr Arg Ala Val Lys Ile Arg Arg Ala Met Ile Ala Arg Thr Pro  
20                    25                    30

Ala Thr Thr Lys His Ser Arg Leu Leu Glu Ser Ser Asn Leu Pro Tyr  
35                    40                    45

Gln His Phe Asp Tyr Asp Arg Val Phe Gly Ala Cys Cys Glu Asn Val  
50                    55                    60

Ile Gly Tyr Met Pro Leu Pro Val Gly Val Ala Gly Pro Leu Thr Ile  
65 70 75 80

Asp Gly Glu Ser Tyr Phe Leu Pro Met Ala Thr Thr Glu Gly Val Leu  
85 90 95

Val Ala Ser Thr Ser Arg Gly Cys Lys Ala Ile Asn Ala Gly Gly Gly  
100 105 110

Ala Val Thr Val Leu Thr Ala Asp Gly Met Thr Arg Gly Pro Cys Val  
115 120 125

Gly Phe Glu Thr Leu Ala Arg Ala Ala Ala Ala Lys Leu Trp Leu  
130 135 140

Asp Ser Glu Glu Gly Gln Lys Val Met Lys Asp Ala Phe Asn Ser Thr  
145 150 155 160

Ser Arg Phe Ala Arg Leu Gln Gln Leu Lys Thr Ser Leu Ala Gly Thr  
165 170 175

Tyr Val Tyr Ile Arg Phe Lys Thr Thr Thr Gly Glu Ala Met Gly Met  
180 185 190

Asn Met Ile Ser Lys Gly Val Glu Lys Ala Leu Asp Val Met Ala Lys  
195 200 205

Glu Ser Gly Phe Glu Asp Met Ala Ile Ile Ser Val Ser Gly Asn Phe  
210 215 220

Cys Thr Asp Lys Lys Pro Ala Ala Ile Asn Trp Ile Asp Gly Arg Gly  
225 230 235 240

Lys Ser Val Val Ala Glu Ala Ile Ile Pro Gly Asp Val Val Arg Ser  
245 250 255

Val Leu Lys Ser Asp Val Asn Ala Leu Val Glu Leu Asn Val Ser Lys  
260 265 270

Asn Leu Ile Gly Ser  
275

<210> 348  
<211> 976  
<212> PRT

<213> Gibberella fujikuroi

<400> 348

Met Asp His Glu Gly Cys Gln Gly Gln His Pro Gln Gln Cys Cys Gln  
1 5 10 15

Trp Val Ser Asn Ala Trp Ser Glu Phe Leu Asp Leu Leu Lys Asn Ala  
20 25 30

Glu Thr Leu Asp Ile Val Ile Met Leu Leu Gly Tyr Ile Ala Met His  
35 40 45

Leu Thr Phe Val Ser Leu Phe Leu Ser Met Arg Lys Met Gly Ser Lys  
50 55 60

Phe Trp Leu Gly Ile Cys Thr Leu Phe Ser Ser Val Phe Ala Phe Leu  
65 70 75 80

Phe Gly Leu Val Val Thr Thr Lys Leu Gly Val Pro Ile Ser Val Ile  
85 90 95

Leu Leu Ser Glu Gly Leu Pro Phe Leu Val Val Thr Ile Gly Phe Glu  
100 105 110

Lys Asn Ile Val Leu Thr Arg Ala Val Met Ser His Ala Ile Glu His  
115 120 125

Arg Arg Ile Gln Ala Gln Asn Ser Lys Ser Gly Lys Arg Ser Pro Asp  
130 135 140

Gly Ser Thr Gln Asn Met Ile Gln Tyr Ala Val Gln Ala Ala Ile Lys  
145 150 155 160

Glu Lys Gly Phe Glu Ile Ile Arg Asp Tyr Ala Ile Glu Ile Val Ile  
165 170 175

Leu Val Ile Gly Ala Ala Ser Gly Val Gln Gly Gly Leu Gln Gln Phe  
180 185 190

Cys Phe Leu Ala Ala Trp Thr Leu Phe Phe Asp Phe Ile Leu Leu Phe  
195 200 205

Thr Phe Tyr Thr Ala Ile Leu Ser Ile Lys Leu Arg Ser Thr Val Ser  
210 215 220

Ser Val Met Ser Ile Cys Val Trp Pro Leu Arg Met Met Ala Ser Arg

225                    230                    235                    240

Arg Val Ala Glu Asn Val Ala Lys Gly Asp Asp Glu Leu Asn Arg Val  
245                    250                    255

Arg Gly Asp Ala Pro Leu Phe Gly Arg Lys Ser Ser Ser Ile Pro Lys  
260                    265                    270

Phe Lys Val Leu Met Ile Leu Gly Phe Ile Phe Val Asn Ile Val Asn  
275                    280                    285

Ile Cys Ser Ile Pro Phe Arg Asn Pro Ser Ser Met Ser Thr Ile Arg  
290                    295                    300

Thr Trp Ala Ser Ser Leu Gly Gly Val Ile Ala Pro Leu Ser Val Asp  
305                    310                    315                    320

Pro Phe Lys Val Ala Ser Asn Gly Leu Asp Ala Ile Leu Pro Thr Ala  
325                    330                    335

Lys Ser Asn Asn Arg Pro Thr Leu Val Thr Val Leu Thr Pro Ile Lys  
340                    345                    350

Tyr Glu Leu Glu Tyr Pro Ser Ile His Tyr Ala Leu Gly Ser Ala Ala  
355                    360                    365

Ser Asn Pro Ala Tyr Asn Asp Ala Phe His His His Phe Gln Gly Tyr  
370                    375                    380

Gly Val Gly Gly Arg Met Val Gly Gly Ile Leu Lys Ser Leu Glu Asp  
385                    390                    395                    400

Pro Val Leu Ser Lys Trp Ile Val Ile Ala Leu Ala Leu Ser Val Ala  
405                    410                    415

Leu Asn Gly Tyr Leu Phe Asn Val Ala Arg Trp Gly Ile Lys Asp Pro  
420                    425                    430

Asn Val Pro Glu His Asn Ile Asp Arg Asn Glu Leu Ala Arg Ala Arg  
435                    440                    445

Glu Phe Asn Asp Thr Gly Ser Ala Thr Leu Pro Leu Gly Glu Tyr Val  
450                    455                    460

Pro Pro Thr Pro Met Arg Thr Gln Pro Ser Thr Pro Ala Ile Thr Asp  
465                    470                    475                    480

Asp Glu Ala Glu Gly Leu His Met Thr Lys Ala Arg Pro Ala Asn Leu  
485 490 495

Pro Asn Arg Ser Asn Glu Glu Leu Glu Lys Leu Leu Ser Glu Asn Ala  
500 505 510

Leu Arg Glu Met Thr Asp Glu Glu Val Ile Ser Leu Ser Met Arg Gly  
515 520 525

Lys Ile Pro Gly Tyr Ala Leu Glu Lys Thr Leu Gly Asp Phe Thr Arg  
530 535 540

Ala Val Lys Ile Arg Arg Ser Ile Ile Ala Arg Asn Lys Ala Ala Ala  
545 550 555 560

Asp Ile Thr His Ser Leu Asp Arg Ser Lys Leu Pro Tyr Glu Asn Tyr  
565 570 575

Asn Trp Glu Arg Phe Phe Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr  
580 585 590

Met Pro Leu Pro Val Gly Val Ala Gly Pro Leu Val Ile Asp Gly Gln  
595 600 605

Ser Tyr Phe Ile Pro Met Ala Thr Thr Glu Gly Val Leu Val Ala Ser  
610 615 620

Ala Ser Arg Gly Cys Lys Ala Ile Asn Ser Gly Gly Ala Ile Thr  
625 630 635 640

Val Leu Thr Ala Asp Gly Met Thr Arg Gly Pro Cys Val Ala Phe Glu  
645 650 655

Thr Leu Glu Arg Ala Gly Ala Ala Lys Leu Trp Leu Asp Ser Glu Ala  
660 665 670

Gly Gln Asp Met Met Lys Lys Ala Phe Asn Ser Thr Ser Arg Phe Ala  
675 680 685

Arg Leu Gln Ser Met Lys Thr Ala Leu Ala Gly Thr Asn Leu Tyr Ile  
690 695 700

Arg Phe Lys Thr Thr Gly Asp Ala Met Gly Met Asn Met Ile Ser  
705 710 715 720

Lys Gly Val Glu His Ala Leu Ser Val Met Ala Asn Asp Gly Gly Phe  
725 730 735

Asp Asp Met Gln Ile Ile Ser Val Ser Gly Asn Tyr Cys Thr Asp Lys  
740 745 750

Lys Ala Ala Ala Leu Asn Trp Ile Asp Gly Arg Gly Lys Gly Val Val  
755 760 765

Ala Glu Ala Ile Ile Pro Gly Glu Val Val Arg Ser Val Leu Lys Ser  
770 775 780

Asp Val Asp Ser Leu Val Glu Leu Asn Val Ala Lys Asn Leu Ile Gly  
785 790 795 800

Ser Ala Met Ala Gly Ser Val Gly Gly Phe Asn Ala His Ala Ala Asn  
805 810 815

Ile Val Ala Ala Ile Phe Leu Ala Thr Gly Gln Asp Pro Ala Gln Val  
820 825 830

Val Glu Ser Ala Asn Cys Ile Thr Ile Met Lys Asn Leu Asn Gly Ala  
835 840 845

Leu Gln Ile Ser Val Ser Met Pro Ser Leu Glu Val Gly Thr Leu Gly  
850 855 860

Gly Gly Thr Ile Leu Glu Pro Gln Gly Ala Met Leu Asp Ile Leu Gly  
865 870 875 880

Val Arg Gly Ser His Pro Thr Asn Pro Gly Asp Asn Ala Arg Arg Leu  
885 890 895

Ala Arg Ile Ile Gly Ala Ala Val Leu Ala Gly Glu Leu Ser Leu Cys  
900 905 910

Ser Ala Leu Ala Ala Gly His Leu Val Arg Ala His Met Gln His Asn  
915 920 925

Arg Ser Ala Ala Pro Ser Arg Ser Thr Thr Pro Gly Ser Ser His Asp  
930 935 940

Ala Arg Leu Thr Gly His Asp Gln Cys Pro Arg Ala Leu Ser Val Asn  
945 950 955 960

Asn Val Asp Glu Arg Arg Arg Tyr Ser Glu Val Lys Ala Ile Asp Glu  
965 970 975

<210> 349  
<211> 244  
<212> PRT  
<213> Rattus norvegicus

<220>  
<221> MISC\_FEATURE  
<222> (1)..(244)  
<223> x equals unknown

<400> 349

Pro Ile Arg Ser Pro Lys Arg Gly Thr Ser Met Gly Met Asn Met Ile  
1 5 10 15

Ser Lys Gly Thr Glu Lys Ala Leu Leu Lys Leu Gln Glu Phe Phe Pro  
20 25 30

Glu Leu Gln Ile Leu Ala Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys  
35 40 45

Pro Ala Ala Ile Asn Trp Ile Glu Gly Arg Gly Lys Thr Val Val Cys  
50 55 60

Glu Ala Val Ile Pro Ala Lys Val Val Arg Glu Val Leu Lys Ser Thr  
65 70 75 80

Thr Glu Ala Met Val Asp Val Asn Ile Asn Lys Asn Leu Val Gly Ser  
85 90 95

Ala Met Ala Gly Ser Ile Gly Gly Tyr Asn Ala His Ala Ala Asn Ile  
100 105 110

Val Thr Ala Ile Tyr Ile Ala Cys Ala Gln Asp Ala Ala Gln Asn Val  
115 120 125

Gly Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser Gly Pro Xaa Xaa  
130 135 140

Glu Asp Leu Xaa Xaa Ser Xaa Xaa Met Pro Ser Ile Glu Ile Gly Thr  
145 150 155 160

Val Gly Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala Cys Leu Gln Met  
165 170 175

Leu Gly Val Gln Gly Ala Cys Lys Asp Asn Pro Gly Glu Asn Ala Arg  
180 185 190

Gln Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala Gly Glu Leu Ser  
195 200 205

Leu Met Ala Ala Leu Ala Ala Gly His Leu Val Arg Ser His Met Val  
210 215 220

His Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Gln Gly Thr Cys Thr  
225 230 235 240

Lys Lys Ala Ala

<210> 350  
<211> 102  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> NON\_TER

<220>  
<221> NON\_TER  
<222> (1)..(102)  
<223> NON\_TER

<400> 350

Leu His Glu Tyr Phe Pro Glu Met Gln Ile Leu Ala Val Ser Gly Asn  
1 5 10 15

Tyr Cys Thr Asp Lys Lys Pro Ala Ala Ile Asn Trp Ile Glu Gly Arg  
20 25 30

Gly Lys Ser Val Val Cys Glu Ala Val Ile Pro Ser Lys Val Val Arg  
35 40 45

Glu Val Leu Lys Thr Thr Glu Ala Met Ile Glu Val Asn Ile Asn  
50 55 60

Lys Asn Leu Val Gly Ser Ala Met Ala Gly Ser Ile Gly Gly Tyr Asn  
65 70 75 80

Ala His Ala Ala Asn Ile Val Thr Ala Ile Tyr Ile Ala Cys Gly Gln  
85 90 95

Asp Ala Ala Gln Asn Val

100

<210> 351  
<211> 115  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> NON\_TER

<220>  
<221> NON\_TER  
<222> (1)..(115)  
<223> NON\_TER

<400> 351

Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser Gly Pro Thr Asn Glu  
1 5 10 15

Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile Glu Ile Gly Thr Val  
20 25 30

Gly Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala Cys Leu Gln Met Leu  
35 40 45

Gly Val Gln Gly Ala Cys Lys Asp Asn Pro Gly Glu Asn Ala Arg Gln  
50 55 60

Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala Gly Glu Leu Ser Leu  
65 70 75 80

Met Ala Ala Leu Ala Ala Gly His Leu Val Lys Ser His Met Ile His  
85 90 95

Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Gln Gly Ala Cys Thr Lys  
100 105 110

Lys Thr Ala  
115

<210> 352  
<211> 462  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> NON\_TER

<220>  
<221> NON\_TER

<222> (1)..(462)

<223> NON\_

<400> 352

Met Val Leu Val Thr Gln Glu Pro Glu Ile Glu Leu Pro Arg Glu Pro  
1 5 10 15

Arg Pro Asn Glu Glu Cys Leu Gln Ile Leu Gly Asn Ala Glu Lys Gly  
20 25 30

Ala Lys Phe Leu Ser Asp Ala Glu Ile Ile Gln Leu Val Asn Ala Lys  
35 40 45

His Ile Pro Ala Tyr Lys Leu Glu Thr Leu Met Glu Thr His Glu Arg  
50 55 60

Gly Val Ser Ile Arg Arg Gln Leu Leu Ser Lys Lys Leu Ser Glu Pro  
65 70 75 80

Ser Ser Leu Gln Tyr Leu Pro Tyr Arg Asp Tyr Asn Tyr Ser Leu Val  
85 90 95

Met Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr Met Pro Ile Pro Val  
100 105 110

Gly Val Ala Gly Pro Leu Cys Leu Asp Glu Lys Glu Phe Gln Val Pro  
115 120 125

Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr Asn Arg Gly Cys  
130 135 140

Arg Ala Ile Gly Leu Gly Gly Ala Ser Ser Arg Val Leu Ala Asp  
145 150 155 160

Gly Met Thr Arg Gly Pro Val Val Arg Leu Pro Arg Ala Cys Asp Ser  
165 170 175

Ala Glu Val Lys Ala Trp Leu Glu Thr Ser Glu Gly Phe Ala Val Ile  
180 185 190

Lys Glu Ala Phe Asp Ser Thr Ser Arg Phe Ala Arg Leu Gln Lys Leu  
195 200 205

His Thr Ser Ile Ala Gly Arg Asn Leu Tyr Ile Arg Phe Gln Ser Arg  
210 215 220

Ser Gly Asp Ala Met Gly Met Asn Met Ile Ser Lys Gly Thr Glu Lys  
225 230 235 240

Ala Leu Ser Lys Leu His Glu Tyr Phe Pro Glu Met Gln Ile Leu Ala  
245 250 255

Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys Pro Ala Ala Ile Asn Trp  
260 265 270

Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala Val Ile Pro Ser  
275 280 285

Lys Val Val Arg Glu Val Leu Lys Thr Thr Glu Ala Met Ile Glu  
290 295 300

Val Asn Ile Asn Lys Asn Leu Val Gly Ser Ala Met Ala Gly Ser Ile  
305 310 315 320

Gly Gly Tyr Asn Ala His Ala Ala Asn Ile Val Thr Ala Ile Tyr Ile  
325 330 335

Ala Cys Gly Gln Asp Ala Ala Gln Asn Val Gly Ser Ser Asn Cys Ile  
340 345 350

Thr Leu Met Glu Ala Ser Gly Pro Thr Asn Glu Asp Leu Tyr Ile Ser  
355 360 365

Cys Thr Met Pro Ser Ile Glu Ile Gly Thr Val Gly Gly Thr Asn  
370 375 380

Leu Leu Pro Gln Gln Ala Cys Leu Gln Met Leu Gly Val Gln Gly Ala  
385 390 395 400

Cys Lys Asp Asn Pro Gly Glu Asn Ala Arg Gln Leu Ala Arg Ile Val  
405 410 415

Cys Gly Thr Val Met Ala Gly Glu Leu Ser Leu Met Ala Ala Leu Ala  
420 425 430

Ala Gly His Leu Val Lys Ser His Met Ile His Asn Arg Ser Lys Ile  
435 440 445

Asn Leu Gln Asp Leu Gln Gly Ala Cys Thr Lys Lys Thr Ala  
450 455 460

<210> 353  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> NON\_TER

<220>  
<221> NON\_TER  
<222> (1)..(123)  
<223> NON\_TER

<400> 353

Met Val Leu Val Thr Gln Glu Pro Glu Ile Glu Leu Pro Arg Glu Pro  
1 5 10 15

Arg Pro Asn Glu Glu Cys Leu Gln Ile Leu Gly Asn Ala Glu Lys Gly  
20 25 30

Ala Lys Phe Leu Ser Asp Ala Glu Ile Ile Gln Leu Val Asn Ala Lys  
35 40 45

His Ile Pro Ala Tyr Lys Leu Glu Thr Leu Met Glu Thr His Glu Arg  
50 55 60

Gly Val Ser Ile Arg Arg Gln Leu Leu Ser Lys Lys Leu Ser Glu Pro  
65 70 75 80

Ser Ser Leu Gln Tyr Leu Pro Tyr Arg Asp Tyr Asn Tyr Ser Leu Val  
85 90 95

Met Gly Ala Cys Cys Glu Asn Val Ile Gly Tyr Met Pro Ile Pro Val  
100 105 110

Gly Val Ala Gly Pro Leu Cys Leu Asp Glu Lys  
115 120

<210> 354  
<211> 562  
<212> PRT  
<213> Arabidopsis thaliana

<400> 354

Met Glu Asp Leu Arg Arg Arg Phe Pro Thr Lys Lys Asn Gly Glu Glu  
1 5 10 15

Ile Ser Asn Val Ala Val Asp Pro Pro Leu Arg Lys Ala Ser Asp Ala  
20 25 30

Leu Pro Leu Pro Leu Tyr Leu Thr Asn Thr Phe Phe Leu Ser Leu Phe  
35 40 45

Phe Ala Thr Val Tyr Phe Leu Leu Ser Arg Trp Arg Glu Lys Ile Arg  
50 55 60

Asn Ser Thr Pro Leu His Val Val Asp Leu Ser Glu Ile Cys Ala Leu  
65 70 75 80

Ile Gly Phe Val Ala Ser Phe Ile Tyr Leu Leu Gly Phe Cys Gly Ile  
85 90 95

Asp Leu Ile Phe Arg Ser Ser Asp Asp Asp Val Trp Val Asn Asp  
100 105 110

Gly Met Ile Pro Cys Asn Gln Ser Leu Asp Cys Arg Glu Val Leu Pro  
115 120 125

Ile Lys Pro Asn Ser Val Asp Pro Pro Arg Glu Ser Glu Leu Asp Ser  
130 135 140

Val Glu Asp Glu Glu Ile Val Lys Leu Val Ile Asp Gly Thr Ile Pro  
145 150 155 160

Ser Tyr Ser Leu Glu Thr Lys Leu Gly Asp Cys Lys Arg Ala Ala Ala  
165 170 175

Ile Arg Arg Glu Ala Val Gln Arg Ile Thr Gly Lys Ser Leu Thr Gly  
180 185 190

Leu Pro Leu Glu Gly Phe Asp Tyr Asn Ser Ile Leu Gly Gln Cys Cys  
195 200 205

Glu Met Pro Val Gly Tyr Val Gln Ile Pro Val Gly Ile Ala Gly Pro  
210 215 220

Leu Leu Leu Asp Gly Val Glu Tyr Ser Val Pro Met Ala Thr Thr Glu  
225 230 235 240

Gly Cys Leu Val Ala Ser Thr Asn Arg Gly Phe Lys Ala Ile His Leu  
245 250 255

Ser Gly Gly Ala Phe Ser Val Leu Val Lys Asp Ala Met Thr Arg Ala  
260 265 270

Pro Val Val Arg Phe Pro Ser Ala Arg Arg Ala Ala Leu Val Met Phe  
275 280 285

Tyr Leu Gln Asp Pro Ser Asn Phe Glu Arg Leu Ser Leu Ile Phe Asn  
290 295 300

Lys Ser Ser Arg Phe Ala Arg Leu Gln Ser Ile Thr Cys Thr Ile Ala  
305 310 315 320

Gly Arg Asn Leu Tyr Pro Arg Phe Ala Cys Ser Thr Gly Asp Ala Met  
325 330 335

Gly Met Asn Met Val Ser Lys Gly Val Gln Asn Val Leu Asp Phe Val  
340 345 350

Lys Ser Glu Phe Pro Asp Met Asp Val Ile Gly Ile Ser Gly Asn Tyr  
355 360 365

Cys Ser Asp Lys Lys Ala Ser Ala Val Asn Trp Ile Glu Gly Arg Gly  
370 375 380

Lys His Val Val Cys Glu Ala Phe Ile Lys Ala Glu Ile Val Glu Lys  
385 390 395 400

Val Leu Lys Thr Ser Val Glu Ala Leu Val Glu Leu Asn Thr Leu Lys  
405 410 415

Asn Leu Val Gly Ser Ala Met Ala Gly Ser Leu Gly Gly Phe Asn Ala  
420 425 430

His Ser Ser Asn Ile Val Ser Ala Val Phe Ile Ala Thr Gly Gln Asp  
435 440 445

Pro Ala Gln Asn Val Glu Ser Ser His Cys Met Thr Met Ile Leu Pro  
450 455 460

Asp Gly Asp Asp Leu His Ile Ser Val Ser Met Pro Cys Ile Glu Val  
465 470 475 480

Gly Thr Val Gly Gly Thr Gln Leu Ala Ser Gln Ala Ala Cys Leu  
485 490 495

Asn Leu Leu Gly Val Lys Gly Ser Asn Asn Glu Lys Pro Gly Ser Asn  
500 505 510

Ala Gln Gln Leu Ala Arg Ile Val Ala Gly Ser Val Leu Ala Gly Glu  
515 520 525

Leu Ser Leu Met Ser Ala Ile Ala Ala Gly Gln Leu Val Lys Ser His  
530 535 540

Met Lys Tyr Asn Arg Ser Ser Arg Asp Ile Gly Pro Ser Ser Gln Val  
545 550 555 560

Asn Arg

<210> 355

<211> 224

<212> PRT

<213> Mus musculus

<400> 355

Glu Lys Ala Leu Leu Lys Leu Gln Glu Phe Phe Pro Asp Met Gln Ile  
1 5 10 15

Leu Ala Val Ser Gly Asn Tyr Cys Thr Asp Lys Lys Pro Ala Ala Ile  
20 25 30

Asn Trp Ile Glu Gly Arg Gly Lys Thr Val Val Cys Glu Ala Val Ile  
35 40 45

Pro Ala Lys Val Val Arg Glu Val Leu Lys Thr Thr Thr Glu Ala Met  
50 55 60

Val Asp Val Asn Ile Asn Lys Asn Leu Val Gly Ser Ala Met Ala Gly  
65 70 75 80

Ser Ile Gly Gly Tyr Asn Ala His Ala Ala Asn Ile Val Thr Ala Ile  
85 90 95

Tyr Ile Ala Cys Gly Gln Asp Ala Ala Gln Asn Val Gly Ser Ser Asn  
100 105 110

Cys Ile Thr Leu Met Glu Ala Ser Gly Pro Thr Asn Glu Asp Leu Tyr  
115 120 125

Ile Ser Cys Thr Met Pro Ser Ile Glu Ile Gly Thr Val Gly Gly Gly  
130 135 140

Thr Asn Leu Leu Pro Gln Gln Ala Cys Leu Gln Met Leu Gly Val Gln  
145 150 155 160

Gly Ala Cys Lys Asp Asn Pro Gly Glu Asn Ala Arg Gln Leu Ala Arg  
165 170 175

Ile Val Cys Gly Thr Val Met Ala Gly Glu Leu Ser Leu Met Ala Ala  
180 185 190

Leu Ala Ala Gly His Leu Val Arg Ser His Met Val His Asn Arg Ser  
195 200 205

Lys Ile Asn Leu Gln Asp Leu Gln Gly Thr Cys Thr Lys Lys Ala Ala  
210 215 220

<210> 356

<211> 887

<212> PRT

<213> Mesocricetus auratus

<400> 356

Met Leu Ser Arg Leu Phe Arg Met His Gly Leu Phe Val Ala Ser His  
1 5 10 15

Pro Trp Glu Val Ile Val Gly Thr Val Thr Leu Thr Ile Cys Met Met  
20 25 30

Ser Met Asn Met Phe Thr Gly Asn Asn Lys Ile Cys Gly Trp Asn Tyr  
35 40 45

Glu Cys Pro Lys Phe Glu Glu Asp Val Leu Ser Ser Asp Ile Ile Ile  
50 55 60

Leu Thr Ile Thr Arg Cys Ile Ala Ile Leu Tyr Ile Tyr Phe Gln Phe  
65 70 75 80

Gln Asn Leu Arg Gln Leu Gly Ser Lys Tyr Ile Leu Gly Ile Ala Gly  
85 90 95

Leu Phe Thr Ile Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His  
100 105 110

Phe Leu Asp Lys Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe  
115 120 125

Leu Leu Leu Ile Asp Leu Ser Arg Ala Ser Ala Leu Ala Lys Phe Ala  
130 135 140

Leu Ser Ser Asn Ser Gln Asp Glu Val Arg Glu Asn Ile Ala Arg Gly  
145 150 155 160

Met Ala Ile Leu Gly Pro Thr Phe Thr Leu Asp Ala Leu Val Glu Cys  
165 170 175

Leu Val Ile Gly Val Gly Thr Met Ser Gly Val Arg Gln Leu Glu Ile  
180 185 190

Met Cys Cys Phe Gly Cys Met Ser Val Leu Ala Asn Tyr Phe Val Phe  
195 200 205

Met Thr Phe Phe Pro Ala Cys Val Ser Leu Val Leu Glu Leu Ser Arg  
210 215 220

Glu Ser Arg Glu Gly Arg Pro Ile Trp Gln Leu Ser His Phe Ala Arg  
225 230 235 240

Val Leu Glu Glu Glu Asn Lys Pro Asn Pro Val Thr Gln Arg Val  
245 250 255

Lys Met Ile Met Ser Leu Gly Leu Val Leu Val His Ala His Ser Arg  
260 265 270

Trp Ile Ala Asp Pro Ser Pro Gln Asn Ser Thr Thr Glu His Ser Lys  
275 280 285

Val Ser Leu Gly Leu Asp Glu Asp Val Ser Lys Arg Ile Glu Pro Ser  
290 295 300

Val Ser Leu Trp Gln Phe Tyr Leu Ser Lys Met Ile Ser Met Asp Ile  
305 310 315 320

Glu Gln Val Val Thr Leu Ser Leu Ala Phe Leu Leu Ala Val Lys Tyr  
325 330 335

Ile Phe Phe Glu Gln Ala Glu Thr Glu Ser Thr Leu Ser Leu Lys Asn  
340 345 350

Pro Ile Thr Ser Pro Val Ala Thr Pro Lys Lys Ala Pro Asp Asn Cys  
355 360 365

Cys Arg Arg Glu Pro Val Leu Ser Arg Arg Asn Glu Lys Leu Ser Ser  
370 375 380

Val Glu Glu Glu Pro Gly Val Asn Gln Asp Arg Lys Val Glu Val Ile

385

390

395

400

Lys Pro Leu Val Ala Glu Thr Glu Ser Thr Ser Arg Ala Thr Phe Val  
405 410 415

Leu Gly Ala Ser Gly Gly Cys Ser Pro Val Ala Leu Gly Thr Gln Glu  
420 425 430

Pro Glu Ile Glu Leu Pro Ser Glu Pro Arg Pro Asn Glu Glu Cys Leu  
435 440 445

Gln Ile Leu Glu Ser Ala Glu Lys Gly Ala Lys Phe Leu Ser Asp Ala  
450 455 460

Glu Ile Ile Gln Leu Val Asn Ala Lys His Ile Pro Ala Tyr Lys Leu  
465 470 475 480

Glu Thr Leu Met Glu Thr His Glu Arg Gly Val Ser Ile Arg Arg Gln  
485 490 495

Leu Leu Ser Thr Lys Leu Pro Glu Pro Ser Ser Leu Gln Tyr Leu Pro  
500 505 510

Tyr Arg Asp Tyr Asn Tyr Ser Leu Val Met Gly Ala Cys Cys Glu Asn  
515 520 525

Val Ile Gly Tyr Met Pro Ile Pro Val Gly Val Ala Gly Pro Leu Cys  
530 535 540

Leu Asp Gly Lys Glu Tyr Gln Val Pro Met Ala Thr Thr Glu Gly Cys  
545 550 555 560

Leu Val Ala Ser Thr Asn Arg Gly Cys Arg Ala Ile Gly Leu Gly Gly  
565 570 575

Gly Ala Ser Ser Arg Val Leu Ala Asp Gly Met Thr Arg Gly Pro Val  
580 585 590

Val Arg Leu Pro Arg Ala Cys Asp Ser Ala Glu Val Lys Ala Trp Leu  
595 600 605

Glu Thr Pro Glu Gly Phe Ala Val Ile Lys Asp Ala Phe Asp Ser Thr  
610 615 620

Ser Arg Phe Ala Arg Leu Gln Lys Leu His Val Thr Met Ala Gly Arg  
625 630 635 640

Asn Leu Tyr Ile Arg Phe Gln Ser Lys Thr Gly Asp Ala Met Gly Met  
645 650 655

Asn Met Ile Ser Lys Gly Thr Glu Lys Ala Leu Val Lys Leu Gln Glu  
660 665 670

Phe Phe Pro Glu Met Gln Ile Leu Ala Val Ser Gly Asn Tyr Cys Thr  
675 680 685

Asp Lys Lys Pro Ala Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Thr  
690 695 700

Val Val Cys Glu Ala Val Ile Pro Ala Arg Val Val Arg Glu Val Leu  
705 710 715 720

Lys Thr Thr Thr Glu Ala Met Ile Asp Val Asn Ile Asn Lys Asn Leu  
725 730 735

Val Gly Ser Ala Met Ala Gly Ser Ile Gly Gly Tyr Asn Ala His Ala  
740 745 750

Ala Asn Ile Val Thr Ala Ile Tyr Ile Ala Cys Gly Gln Asp Ala Ala  
755 760 765

Gln Asn Val Gly Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser Gly  
770 775 780

Pro Thr Asn Glu Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile Glu  
785 790 795 800

Ile Gly Thr Val Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala Cys  
805 810 815

Leu Gln Met Leu Gly Val Gln Gly Ala Cys Lys Asp Asn Pro Gly Glu  
820 825 830

Asn Ala Arg Gln Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala Gly  
835 840 845

Glu Leu Ser Leu Met Ala Ala Leu Ala Ala Gly His Leu Val Arg Ser  
850 855 860

His Met Val His Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Gln Gly  
865 870 875 880

Thr Cys Thr Lys Lys Ala Ala  
885

<210> 357  
<211> 592  
<212> PRT.  
<213> Arabidopsis thaliana

<400> 357

Met Asp Leu Arg Arg Arg Pro Pro Lys Pro Pro Val Thr Asn Asn Asn  
1 5 10 15

Asn Ser Asn Gly Ser Phe Arg Ser Tyr Gln Pro Arg Thr Ser Asp Asp  
20 25 30

Asp His Arg Arg Arg Ala Thr Thr Ile Ala Pro Pro Pro Lys Ala Ser  
35 40 45

Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Ala Val Phe Phe Thr  
50 55 60

Leu Phe Phe Ser Val Ala Tyr Tyr Leu Leu His Arg Trp Arg Asp Lys  
65 70 75 80

Ile Arg Tyr Asn Thr Pro Leu His Val Val Thr Ile Thr Glu Leu Gly  
85 90 95

Ala Ile Ile Ala Leu Ile Ala Ser Phe Ile Tyr Leu Leu Gly Phe Phe  
100 105 110

Gly Ile Asp Phe Val Gln Ser Phe Ile Ser Arg Ala Ser Gly Asp Ala  
115 120 125

Trp Asp Leu Ala Asp Thr Ile Asp Asp Asp His Arg Leu Val Thr  
130 135 140

Cys Ser Pro Pro Thr Pro Ile Val Ser Val Ala Lys Leu Pro Asn Pro  
145 150 155 160

Glu Pro Ile Val Thr Glu Ser Leu Pro Glu Glu Asp Glu Glu Ile Val  
165 170 175

Lys Ser Val Ile Asp Gly Val Ile Pro Ser Tyr Ser Leu Glu Ser Arg  
180 185 190

Leu Gly Asp Cys Lys Arg Ala Ala Ser Ile Arg Arg Glu Ala Leu Gln

195

200

205

Arg Val Thr Gly Arg Ser Ile Glu Gly Leu Pro Leu Asp Gly Phe Asp  
210 215 220

Tyr Glu Ser Ile Leu Gly Gln Cys Cys Glu Met Pro Val Gly Tyr Ile  
225 230 235 240

Gln Ile Pro Val Gly Ile Ala Gly Pro Leu Leu Leu Asp Gly Tyr Glu  
245 250 255

Tyr Ser Val Pro Met Ala Thr Thr Glu Gly Cys Leu Val Ala Ser Thr  
260 265 270

Asn Arg Gly Cys Lys Ala Met Phe Ile Ser Gly Gly Ala Thr Ser Thr  
275 280 285

Val Leu Lys Asp Gly Met Thr Arg Ala Pro Val Val Arg Phe Ala Ser  
290 295 300

Ala Arg Arg Ala Ser Glu Leu Lys Phe Phe Leu Glu Asn Pro Glu Asn  
305 310 315 320

Phe Asp Thr Leu Ala Val Val Phe Asn Arg Ser Ser Arg Phe Ala Arg  
325 330 335

Leu Gln Ser Val Lys Cys Thr Ile Ala Gly Lys Asn Ala Tyr Val Arg  
340 345 350

Phe Cys Cys Ser Thr Gly Asp Ala Met Gly Met Asn Met Val Ser Lys  
355 360 365

Gly Val Gln Asn Val Leu Glu Tyr Leu Thr Asp Asp Phe Pro Asp Met  
370 375 380

Asp Val Ile Gly Ile Ser Gly Asn Phe Cys Ser Asp Lys Lys Pro Ala  
385 390 395 400

Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala  
405 410 415

Val Ile Arg Gly Glu Ile Val Asn Lys Val Leu Lys Thr Ser Val Ala  
420 425 430

Ala Leu Val Glu Leu Asn Met Leu Lys Asn Leu Ala Gly Ser Ala Val  
435 440 445

Ala Gly Ser Leu Gly Gly Phe Asn Ala His Ala Ser Asn Ile Val Ser  
450 455 460

Ala Val Phe Ile Ala Thr Gly Gln Asp Pro Ala Gln Asn Val Glu Ser  
465 470 475 480

Ser Gln Cys Ile Thr Met Met Glu Ala Ile Asn Asp Gly Lys Asp Ile  
485 490 495

His Ile Ser Val Thr Met Pro Ser Ile Glu Val Gly Thr Val Gly Gly  
500 505 510

Gly Thr Gln Leu Ala Ser Gln Ser Ala Cys Leu Asn Leu Leu Gly Val  
515 520 525

Lys Gly Ala Ser Thr Glu Ser Pro Gly Met Asn Ala Arg Arg Leu Ala  
530 535 540

Thr Ile Val Ala Gly Ala Val Leu Ala Gly Glu Leu Ser Leu Met Ser  
545 550 555 560

Ala Ile Ala Ala Gly Gln Leu Val Arg Ser His Met Lys Tyr Asn Arg  
565 570 575

Ser Ser Arg Asp Ile Ser Gly Ala Thr Thr Thr Thr Thr Thr Thr Thr  
580 585 590

<210> 358  
<211> 948  
<212> PRT  
<213> Schistosoma mansoni

<400> 358

Met Leu Lys Ile Leu Asn Thr Val Leu Leu Phe Phe Asp Cys Phe Ser  
1 5 10 15

Thr Gly Thr Phe Phe Val Leu Leu Ile Tyr Leu Phe Thr Arg Leu Arg  
20 25 30

Thr His Leu Leu His Phe Ser Ser Ser Asn Cys His Leu Asp Val Ile  
35 40 45

Ile Tyr Gln Ser Arg Ala Val Ile Ile Phe Leu Val Val Phe Val Tyr  
50 55 60

Phe	Ile	Gly	Val	Leu	Thr	Cys	Lys	Ile	Asn	Asp	Lys	Ile	Leu	Val	His
65				70				75				80			
Thr	Met	Leu	Arg	Asn	Lys	Arg	Gln	Leu	Asn	Thr	Leu	Phe	Tyr	Thr	Leu
		85						90					95		
Ile	Leu	Phe	Thr	Phe	Ala	Leu	Cys	Ser	Leu	Ser	Ser	Val	Leu	Phe	Val
					100			105					110		
Pro	Tyr	Thr	Ser	Phe	Ala	Ile	Phe	Leu	Leu	Ser	Thr	Ser	Val	Phe	Leu
					115			120					125		
Leu	Phe	Ser	Asp	Leu	Ser	Val	Phe	Phe	Ile	Val	Leu	Glu	Tyr	Tyr	Leu
					130			135				140			
Leu	Glu	Ile	Glu	Leu	Val	Asn	Tyr	Glu	His	Ala	Lys	Arg	His	Cys	Leu
					145			150			155				160
Leu	Ser	His	Leu	Phe	Ser	Asn	Gln	Leu	Phe	Val	Asp	His	Met	Leu	Gly
					165				170					175	
Met	Phe	Leu	Lys	Thr	Ser	Leu	Phe	Ser	Ile	Ser	Thr	Thr	Ser	Lys	Tyr
					180			185					190		
Ala	Tyr	Leu	Glu	Ser	Ile	Phe	Lys	Cys	Thr	Leu	Met	Glu	Gln	Ile	Ile
					195			200					205		
Tyr	Ile	Met	Ile	Val	Phe	Val	Phe	Leu	Pro	Ser	Phe	Met	Arg	Ile	Phe
					210			215				220			
Ala	Ser	Tyr	Ala	Lys	Arg	Met	Tyr	Gly	Glu	Gln	Lys	Lys	Cys	Leu	Val
					225			230			235				240
Ser	Asn	Lys	Gly	Val	Ser	Ser	Ser	Thr	Arg	Lys	Arg	Arg	His	Ser	Tyr
					245				250					255	
Ser	Ser	Gly	His	Ser	Tyr	Val	Glu	Tyr	Arg	Arg	Met	Ser	Val	His	Asn
					260			265					270		
Leu	Ile	Gly	Tyr	Val	Val	Asn	Pro	Asn	Cys	His	Tyr	Lys	Cys	Trp	Ser
					275			280				285			
Thr	Thr	Phe	Val	Ile	Phe	Val	Ser	Leu	Ile	Ile	Leu	His	Leu	Asn	Asn
					290			295				300			
Arg	Tyr	Ser	Glu	Arg	Ile	Ser	Ser	Phe	Lys	His	Asn	Ser	Ser	Glu	Asn

305                   310                   315                   320

Glu Val Phe Pro Val Leu Tyr His Ile Thr Ala Tyr Glu Val Thr Ser  
325                   330                   335

Ile Phe His Phe Ile Tyr Asn Ile Phe His Val Ile Asn Ala Asn Leu  
340                   345                   350

Val Val Tyr Leu Phe Leu Gly Leu Phe Leu Phe Lys Arg Ile Arg Leu  
355                   360                   365

Asn Lys Pro Ile Asn Ser Gln Leu Arg Asn Leu Asn Ile Pro Lys Ile  
370                   375                   380

Lys Glu Thr Leu Ile Ser Asp Gln Val Lys Gln Ser Pro Val Leu Pro  
385                   390                   395                   400

Lys Phe Ser Lys Lys Leu Asn Asp Ile Pro Leu Gln Ser Arg Lys Arg  
405                   410                   415

Ile Tyr Cys Leu His Lys Asp Asp Asp Tyr Ile Asp Arg Asn Asp Ser  
420                   425                   430

Ser Ser Val Ser Thr Phe Ser Asn Thr Cys Lys Asn Ser Asn Glu Arg  
435                   440                   445

Pro Ser Asn Val Leu Asp Leu Asp Met Leu Thr Glu Lys Ile Lys Gln  
450                   455                   460

Gly Leu Gly His Glu Leu Ser Asp Thr Glu Ile Leu Gln Leu Leu Ser  
465                   470                   475                   480

His Gly Arg Leu Lys Thr Arg Glu Leu Glu Ser Val Val Arg Asn Pro  
485                   490                   495

Phe Arg Ala Val Glu Leu Arg Arg Leu Asp Leu Ser Thr Phe Leu Asn  
500                   505                   510

Asn Pro His Ile Ile Glu Arg Ile Pro Tyr Lys Asp Tyr Asp Tyr Arg  
515                   520                   525

Leu Val Tyr Gly Gln Cys Cys Glu Glu Val Ile Gly Tyr Met Pro Ile  
530                   535                   540

Pro Val Gly Lys Ile Gly Pro Leu Leu Leu Asp Gly Arg Ser His Tyr  
545                   550                   555                   560

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Arg Asp Gln Met Thr Arg Ala Pro Val Val Trp Phe Pro Ser Ile Ile  
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Asp Ser Val Lys Cys Ile Ala Trp Ile Asp Ser Glu Glu Gly Phe Gln  
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Ser Val Phe Ala Cys Pro Ala Gly Arg Tyr Ile His Ile Arg Phe Ala  
645 650 655

Ala Arg Thr Gly Asp Ala Met Gly Met Asn Met Val Ser Lys Ala Thr  
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Asp Ser Ala Leu His Cys Leu Lys Lys Tyr Phe Ser Asn Met Gln Val  
675 680 685

Ile Ser Leu Ser Gly Asn Met Cys Thr Asp Lys Lys Pro Ala Thr Ile  
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Asn Thr Ile Leu Gly Arg Gly Lys Ser Val Ile Ala Glu Ala His Leu  
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Ser Ala Asp Val Leu Ala Gln Val Leu His Thr Asn Ala Gln Arg Leu  
725 730 735

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740 745 750

Cys Pro Gly Met Met Gly Cys Asn Ala His Ala Ala Asn Ile Ile Ala  
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Gly Met Phe Ala Ala Thr Gly Gln Asp Leu Ala Gln Val Val Asp Ser  
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Ser Ser Cys Leu Thr Gln Leu Glu Val Asp Leu Ser Asp Asp Ser Leu  
785 790 795 800

Val Ala Ser Val Thr Met Pro Cys Leu Glu Val Gly Thr Val Gly Gly  
805 810 815

Gly Thr Arg Leu Ser Gly Gln Arg Ala Cys Leu Asp Leu Leu Asp Leu  
820 825 830

Ser Val Asp Arg Pro Thr Glu His Leu Ser Arg Ile Ile Ala Gly Thr  
835 840 845

Val Leu Ala Ala Glu Leu Ser Leu Met Ala Ala Leu Asp Thr Asp Asp  
850 855 860

Leu Val Lys Ala His Met His Phe Asn Arg Ala Lys Gln Ser Thr Asn  
865 870 875 880

Ser His Ser Cys Ser His Ser Thr Thr Asp Asn Asn Asp Asn Ile  
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Gln Asn Val Gly Ser Ser Asn Cys Ile Thr Leu Met Glu Ala Ser Gly  
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Pro Thr Asn Glu Asp Leu Tyr Ile Ser Cys Thr Met Pro Ser Ile Glu  
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Ile Gly Thr Val Gly Gly Thr Asn Leu Leu Pro Gln Gln Ala Cys  
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Leu Gln Met Leu Gly Val Gln Gly Ala Cys Lys Asp Asn Pro Gly Glu  
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Asn Ala Arg Gln Leu Ala Arg Ile Val Cys Gly Thr Val Met Ala Gly  
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Glu Leu Ser Leu Met Ala Ala Leu Ala Ala Gly His Leu Val Arg Ser  
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His Met Val His Asn Arg Ser Lys Ile Asn Leu Gln Asp Leu Gln Gly  
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<212> DNA

<213> Stevia rebaudiana

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<400> 383

Met Asn Leu Ser Leu Cys Ile Ala Ser Pro Leu Leu Thr Lys Ser Asn  
1 5 10 15

Arg Pro Ala Ala Leu Ser Ala Ile His Thr Ala Ser Thr Ser His Gly  
20 25 30

Gly Gln Thr Asn Pro Thr Asn Leu Ile Asp Thr Thr Lys Glu Arg  
35 40 45

Ile Gln Lys Gln Phe Lys Asn Val Glu Ile Ser Val Ser Ser Tyr Asp  
50 55 60

Thr Ala Trp Val Ala Met Val Pro Ser Pro Asn Ser Pro Lys Ser Pro  
65 70 75 80

Cys Phe Pro Glu Cys Leu Asn Trp Leu Ile Asn Asn Gln Leu Asn Asp  
85 90 95

Gly Ser Trp Gly Leu Val Asn His Thr His Asn His Asn His Pro Leu  
100 105 110

Leu Lys Asp Ser Leu Ser Ser Thr Leu Ala Cys Ile Val Ala Leu Lys  
115 120 125

Arg Trp Asn Val Gly Glu Asp Gln Ile Asn Lys Gly Leu Ser Phe Ile  
130 135 140

Glu Ser Asn Leu Ala Ser Ala Thr Glu Lys Ser Gln Pro Ser Pro Ile  
145 150 155 160

Gly Phe Asp Ile Ile Phe Pro Gly Leu Leu Glu Tyr Ala Lys Asn Leu  
165 170 175

Asp Ile Asn Leu Leu Ser Lys Gln Thr Asp Phe Ser Leu Met Leu His  
180 185 190

Lys Arg Glu Leu Glu Gln Lys Arg Cys His Ser Asn Glu Met Asp Gly  
195 200 205

Tyr Leu Ala Tyr Ile Ser Glu Gly Leu Gly Asn Leu Tyr Asp Trp Asn  
210 215 220

Met Val Lys Lys Tyr Gln Met Lys Asn Gly Ser Val Phe Asn Ser Pro  
225 230 235 240

Ser Ala Thr Ala Ala Ala Phe Ile Asn His Gln Asn Pro Gly Cys Leu  
245 250 255

Asn Tyr Leu Asn Ser Leu Leu Asp Lys Phe Gly Asn Ala Val Pro Thr  
260 265 270

Val Tyr Pro His Asp Leu Phe Ile Arg Leu Ser Met Val Asp Thr Ile  
275 280 285

Glu Arg Leu Gly Ile Ser His His Phe Arg Val Glu Ile Lys Asn Val  
290 295 300

Leu Asp Glu Thr Tyr Arg Cys Trp Val Glu Arg Asp Glu Gln Ile Phe  
305 310 315 320

Met Asp Val Val Thr Cys Ala Leu Ala Phe Arg Leu Leu Arg Ile Asn  
325 330 335

Gly Tyr Glu Val Ser Pro Asp Pro Leu Ala Glu Ile Thr Asn Glu Leu  
340 345 350

Ala Leu Lys Asp Glu Tyr Ala Ala Leu Glu Thr Tyr His Ala Ser His  
355 360 365

Ile Leu Tyr Gln Glu Asp Leu Ser Ser Gly Lys Gln Ile Leu Lys Ser  
370 375 380

Ala Asp Phe Leu Lys Glu Ile Ile Ser Thr Asp Ser Asn Arg Leu Ser  
385 390 395 400

Lys Leu Ile His Lys Glu Val Glu Asn Ala Leu Lys Phe Pro Ile Asn  
405 410 415

Thr Gly Leu Glu Arg Ile Asn Thr Arg Arg Asn Ile Gln Leu Tyr Asn  
420 425 430

Val Asp Asn Thr Arg Ile Leu Lys Thr Thr Tyr His Ser Ser Asn Ile  
435 440 445

Ser Asn Thr Asp Tyr Leu Arg Leu Ala Val Glu Asp Phe Tyr Thr Cys  
450 455 460

Gln Ser Ile Tyr Arg Glu Glu Leu Lys Gly Leu Glu Arg Trp Val Val  
465 470 475 480

Glu Asn Lys Leu Asp Gln Leu Lys Phe Ala Arg Gln Lys Thr Ala Tyr  
485 490 495

Cys Tyr Phe Ser Val Ala Ala Thr Leu Ser Ser Pro Glu Leu Ser Asp  
500 505 510

Ala Arg Ile Ser Trp Ala Lys Asn Gly Ile Leu Thr Thr Val Val Asp  
515 520 525

Asp Phe Phe Asp Ile Gly Gly Thr Ile Asp Glu Leu Thr Asn Leu Ile  
530 535 540

Gln Cys Val Glu Lys Trp Asn Val Asp Val Asp Lys Asp Cys Cys Ser  
545 550 555 560

Glu His Val Arg Ile Leu Phe Leu Ala Leu Lys Asp Ala Ile Cys Trp  
565 570 575

Ile Gly Asp Glu Ala Phe Lys Trp Gln Ala Arg Asp Val Thr Ser His  
580 585 590

Val Ile Gln Thr Trp Leu Glu Leu Met Asn Ser Met Leu Arg Glu Ala  
595 600 605

Ile Trp Thr Arg Asp Ala Tyr Val Pro Thr Leu Asn Glu Tyr Met Glu  
610 615 620

Asn Ala Tyr Val Ser Phe Ala Leu Gly Pro Ile Val Lys Pro Ala Ile  
625 630 635 640

Tyr Phe Val Gly Pro Lys Leu Ser Glu Glu Ile Val Glu Ser Ser Glu  
645 650 655

Tyr His Asn Leu Phe Lys Leu Met Ser Thr Gln Gly Arg Leu Leu Asn  
660 665 670

Asp Ile His Ser Phe Lys Arg Glu Phe Lys Glu Gly Lys Leu Asn Ala  
675 680 685

Val Ala Leu His Leu Ser Asn Gly Glu Ser Gly Lys Val Glu Glu Glu  
690 695 700

Val Val Glu Glu Met Met Met Ile Lys Asn Lys Arg Lys Glu Leu  
705 710 715 720

Met Lys Leu Ile Phe Glu Glu Asn Gly Ser Ile Val Pro Arg Ala Cys  
725 730 735

Lys Asp Ala Phe Trp Asn Met Cys His Val Leu Asn Phe Phe Tyr Ala  
740 745 750

Asn Asp Asp Gly Phe Thr Gly Asn Thr Ile Leu Asp Thr Val Lys Asp  
755 760 765

Ile Ile Tyr Asn Pro Leu Val Leu Val Asn Glu Asn Glu Glu Gln Arg  
770 775 780

<210> 384  
<211> 784  
<212> PRT  
<213> Stevia rebaudiana

<400> 384

Met Asn Leu Ser Leu Cys Ile Ala Ser Pro Leu Leu Thr Lys Ser Ser  
1 5 10 15

Arg Pro Thr Ala Leu Ser Ala Ile His Thr Ala Ser Thr Ser His Gly  
20 25 30

Gly Gln Thr Asn Pro Thr Asn Leu Ile Ile Asp Thr Thr Lys Glu Arg  
35 40 45

Ile Gln Lys Leu Phe Lys Asn Val Glu Ile Ser Val Ser Ser Tyr Asp  
50 55 60

Thr Ala Trp Val Ala Met Val Pro Ser Pro Asn Ser Pro Lys Ser Pro  
65 70 75 80

Cys Phe Pro Glu Cys Leu Asn Trp Leu Ile Asn Asn Gln Leu Asn Asp  
85 90 95

Gly Ser Trp Gly Leu Val Asn His Thr His Asn His Asn His Pro Leu  
100 105 110

Leu Lys Asp Ser Leu Ser Ser Thr Leu Ala Cys Ile Val Ala Leu Lys  
115 120 125

Arg Trp Asn Val Gly Glu Asp Gln Ile Asn Lys Gly Leu Ser Phe Ile  
130 135 140

Glu Ser Asn Leu Ala Ser Ala Thr Asp Lys Ser Gln Pro Ser Pro Ile  
145 150 155 160

Gly Phe Asp Ile Ile Phe Pro Gly Leu Leu Glu Tyr Ala Lys Asn Leu  
165 170 175

Asp Ile Asn Leu Leu Ser Lys Gln Thr Asp Phe Ser Leu Met Leu His  
180 185 190

Lys Arg Glu Leu Glu Gln Lys Arg Cys His Ser Asn Glu Ile Asp Gly  
195 200 205

Tyr Leu Ala Tyr Ile Ser Glu Gly Leu Gly Asn Leu Tyr Asp Trp Asn  
210 215 220

Met Val Lys Tyr Gln Met Lys Asn Gly Ser Val Phe Asn Ser Pro  
225 230 235 240

Ser Ala Thr Ala Ala Ala Phe Ile Asn His Gln Asn Pro Gly Cys Leu  
245 250 255

Asn Tyr Leu Asn Ser Leu Leu Asp Lys Phe Gly Asn Ala Val Pro Thr  
260 265 270

Val Tyr Pro Leu Asp Leu Tyr Ile Arg Leu Ser Met Val Asp Thr Ile  
275 280 285

Glu Arg Leu Gly Ile Ser His His Phe Arg Val Glu Ile Lys Asn Val  
290 295 300

Leu Asp Glu Thr Tyr Arg Cys Trp Val Glu Arg Asp Glu Gln Ile Phe  
305 310 315 320

Met Asp Val Val Thr Cys Ala Leu Ala Phe Arg Leu Leu Arg Ile His  
325 330 335

Gly Tyr Lys Val Ser Pro Asp Gln Leu Ala Glu Ile Thr Asn Glu Leu  
340 345 350

Ala Phe Lys Asp Glu Tyr Ala Ala Leu Glu Thr Tyr His Ala Ser Gln  
355 360 365

Ile Leu Tyr Gln Glu Asp Leu Ser Ser Gly Lys Gln Ile Leu Lys Ser  
370 375 380

Ala Asp Phe Leu Lys Gly Ile Leu Ser Thr Asp Ser Asn Arg Leu Ser  
385 390 395 400

Lys Leu Ile His Lys Glu Val Glu Asn Ala Leu Lys Phe Pro Ile Asn  
405 410 415

Thr Gly Leu Glu Arg Ile Asn Thr Arg Arg Asn Ile Gln Leu Tyr Asn  
420 425 430

Val Asp Asn Thr Arg Ile Leu Lys Thr Thr Tyr His Ser Ser Asn Ile  
435 440 445

Ser Asn Thr Tyr Tyr Leu Arg Leu Ala Val Glu Asp Phe Tyr Thr Cys  
450 455 460

Gln Ser Ile Tyr Arg Glu Glu Leu Lys Gly Leu Glu Arg Trp Val Val  
465 470 475 480

Gln Asn Lys Leu Asp Gln Leu Lys Phe Ala Arg Gln Lys Thr Ala Tyr  
485 490 495

Cys Tyr Phe Ser Val Ala Ala Thr Leu Ser Ser Pro Glu Leu Ser Asp  
500 505 510

Ala Arg Ile Ser Trp Ala Lys Asn Gly Ile Leu Thr Thr Val Val Asp  
515 520 525

Asp Phe Phe Asp Ile Gly Gly Thr Ile Asp Glu Leu Thr Asn Leu Ile  
530 535 540

Gln Cys Val Glu Lys Trp Asn Val Asp Val Asp Lys Asp Cys Cys Ser  
545 550 555 560

Glu His Val Arg Ile Leu Phe Leu Ala Leu Lys Asp Ala Ile Cys Trp  
565 570 575

Ile Gly Asp Glu Ala Phe Lys Trp Gln Ala Arg Asp Val Thr Ser His  
580 585 590

Val Ile Gln Thr Trp Leu Glu Leu Met Asn Ser Met Leu Arg Glu Ala  
595 600 605

Ile Trp Thr Arg Asp Ala Tyr Val Pro Thr Leu Asn Glu Tyr Met Glu  
610 615 620

Asn Ala Tyr Val Ser Phe Ala Leu Gly Pro Ile Val Lys Pro Ala Ile  
625 630 635 640

Tyr Phe Val Gly Pro Lys Leu Ser Glu Glu Ile Val Glu Ser Ser Glu  
645 650 655

Tyr His Asn Leu Phe Lys Leu Met Ser Thr Gln Gly Arg Leu Leu Asn  
660 665 670

Asp Ile His Ser Phe Lys Arg Glu Phe Lys Glu Gly Lys Leu Asn Ala  
675 680 685

Val Ala Leu His Leu Ser Asn Gly Glu Ser Gly Lys Val Glu Glu Glu  
690 695 700

Val Val Glu Glu Met Met Met Ile Lys Asn Lys Arg Lys Glu Leu  
705 710 715 720

Met Lys Leu Ile Phe Glu Glu Asn Gly Ser Ile Val Pro Arg Ala Cys  
725 730 735

Lys Asp Ala Phe Trp Asn Met Cys His Val Leu Asn Phe Phe Tyr Ala  
740 745 750

Asn Asp Asp Gly Phe Thr Gly Asn Thr Ile Leu Asp Thr Val Lys Asp  
755 760 765

Ile Ile Tyr Asn Pro Leu Val Leu Val Asn Glu Asn Glu Glu Gln Arg  
770 775 780

<210> 385  
<211> 787  
<212> PRT  
<213> Stevia rebaudiana

<400> 385

Met Lys Thr Gly Phe Ile Ser Pro Ala Thr Val Phe His His Arg Ile  
1 5 10 15

Ser Pro Ala Thr Thr Phe Arg His His Leu Ser Pro Ala Thr Thr Asn  
20 25 30

Ser Thr Gly Ile Val Ala Leu Arg Asp Ile Asn Phe Arg Cys Lys Ala  
35 40 45

Val Ser Lys Glu Tyr Ser Asp Leu Leu Gln Lys Asp Glu Ala Ser Phe  
50 55 60

Thr Lys Trp Asp Asp Asp Lys Val Lys Asp His Leu Asp Thr Asn Lys  
65 70 75 80

Asn Leu Tyr Pro Asn Asp Glu Ile Lys Glu Phe Val Glu Ser Val Lys  
85 90 95

Ala Met Phe Gly Ser Met Asn Asp Gly Glu Ile Asn Val Ser Ala Tyr  
100 105 110

Asp Thr Ala Trp Val Ala Leu Val Gln Asp Val Asp Gly Ser Gly Ser  
115 120 125

Pro Gln Phe Pro Ser Ser Leu Glu Trp Ile Ala Asn Asn Gln Leu Ser  
130 135 140

Asp Gly Ser Trp Gly Asp His Leu Leu Phe Ser Ala His Asp Arg Ile  
145 150 155 160

Ile Asn Thr Leu Ala Cys Val Ile Ala Leu Thr Ser Trp Asn Val His  
165 170 175

Pro Ser Lys Cys Glu Lys Gly Leu Asn Phe Leu Arg Glu Asn Ile Cys  
180 185 190

Lys Leu Glu Asp Glu Asn Ala Glu His Met Pro Ile Gly Phe Glu Val  
195 200 205

Thr Phe Pro Ser Leu Ile Asp Ile Ala Lys Lys Leu Asn Ile Glu Val  
210 215 220

Pro Glu Asp Thr Pro Ala Leu Lys Glu Ile Tyr Ala Arg Arg Asp Ile  
225 230 235 240

Lys Leu Thr Lys Ile Pro Met Glu Val Leu His Lys Val Pro Thr Thr  
245 250 255

Leu Leu His Ser Leu Glu Gly Met Pro Asp Leu Glu Trp Glu Lys Leu  
260 265 270

Leu Lys Leu Gln Cys Lys Asp Gly Ser Phe Leu Phe Ser Pro Ser Ser  
275 280 285

Thr Ala Phe Ala Leu Met Gln Thr Lys Asp Glu Lys Cys Leu Gln Tyr  
290 295 300

Leu Thr Asn Ile Val Thr Lys Phe Asn Gly Gly Val Pro Asn Val Tyr  
305 310 315 320

Pro Val Asp Leu Phe Glu His Ile Trp Val Val Asp Arg Leu Gln Arg  
325 330 335

Leu Gly Ile Ala Arg Tyr Phe Lys Ser Glu Ile Lys Asp Cys Val Glu  
340 345 350

Tyr Ile Asn Lys Tyr Trp Thr Lys Asn Gly Ile Cys Trp Ala Arg Asn  
355 360 365

Thr His Val Gln Asp Ile Asp Asp Thr Ala Met Gly Phe Arg Val Leu  
370 375 380

Arg Ala His Gly Tyr Asp Val Thr Pro Asp Val Phe Arg Gln Phe Glu  
385 390 395 400

Lys Asp Gly Lys Phe Val Cys Phe Ala Gly Gln Ser Thr Gln Ala Val  
405 410 415

Thr Gly Met Phe Asn Val Tyr Arg Ala Ser Gln Met Leu Phe Pro Gly  
420 425 430

Glu Arg Ile Leu Glu Asp Ala Lys Lys Phe Ser Tyr Asn Tyr Leu Lys  
435 440 445

Glu Lys Gln Ser Thr Asn Glu Leu Leu Asp Lys Trp Ile Ile Ala Lys  
450 455 460

Asp Leu Pro Gly Glu Val Gly Tyr Ala Leu Asp Ile Pro Trp Tyr Ala  
465 470 475 480

Ser Leu Pro Arg Leu Glu Thr Arg Tyr Tyr Leu Glu Gln Tyr Gly Gly  
485 490 495

Glu Asp Asp Val Trp Ile Gly Lys Thr Leu Tyr Arg Met Gly Tyr Val  
500 505 510

Ser Asn Asn Thr Tyr Leu Glu Met Ala Lys Leu Asp Tyr Asn Asn Tyr  
515 520 525

Val Ala Val Leu Gln Leu Glu Trp Tyr Thr Ile Gln Gln Trp Tyr Val  
530 535 540

Asp Ile Gly Ile Glu Lys Phe Glu Ser Asp Asn Ile Lys Ser Val Leu  
545 550 555 560

Val Ser Tyr Tyr Leu Ala Ala Ala Ser Ile Phe Glu Pro Glu Arg Ser  
565 570 575

Lys Glu Arg Ile Ala Trp Ala Lys Thr Thr Ile Leu Val Asp Lys Ile  
580 585 590

Thr Ser Ile Phe Asp Ser Ser Gln Ser Ser Lys Glu Asp Ile Thr Ala  
595 600 605

Phe Ile Asp Lys Phe Arg Asn Lys Ser Ser Ser Lys Lys His Ser Ile  
610 615 620

Asn Gly Glu Pro Trp His Glu Val Met Val Ala Leu Lys Lys Thr Leu  
625 630 635 640

His Gly Phe Ala Leu Asp Ala Leu Met Thr His Ser Gln Asp Ile His  
645 650 655

Pro Gln Leu His Gln Ala Trp Glu Met Trp Leu Thr Lys Leu Gln Asp  
660 665 670

Gly Val Asp Val Thr Ala Glu Leu Met Val Gln Met Ile Asn Met Thr  
675 680 685

Ala Gly Arg Trp Val Ser Lys Glu Leu Leu Thr His Pro Gln Tyr Gln  
690 695 700

Arg Leu Ser Thr Val Thr Asn Ser Val Cys His Asp Ile Thr Lys Leu  
705 710 715 720

His Asn Phe Lys Glu Asn Ser Thr Thr Val Asp Ser Lys Val Gln Glu  
725 730 735

Leu Val Gln Leu Val Phe Ser Asp Thr Pro Asp Asp Leu Asp Gln Asp

740

745

750

Met Lys Gln Thr Phe Leu Thr Val Met Lys Thr Phe Tyr Tyr Lys Ala  
755 760 765

Trp Cys Asp Pro Asn Thr Ile Asn Asp His Ile Ser Lys Val Phe Glu  
770 775 780

Ile Val Ile  
785

<210> 386  
<211> 862  
<212> PRT  
<213> Taxus brevifolia

<400> 386

Met Ala Gln Leu Ser Phe Asn Ala Ala Leu Lys Met Asn Ala Leu Gly  
1 5 10 15

Asn Lys Ala Ile His Asp Pro Thr Asn Cys Arg Ala Lys Ser Glu Arg  
20 25 30

Gln Met Met Trp Val Cys Ser Arg Ser Gly Arg Thr Arg Val Lys Met  
35 40 45

Ser Arg Gly Ser Gly Gly Pro Gly Pro Val Val Met Met Ser Ser Ser  
50 55 60

Thr Gly Thr Ser Lys Val Val Ser Glu Thr Ser Ser Thr Ile Val Asp  
65 70 75 80

Asp Ile Pro Arg Leu Ser Ala Asn Tyr His Gly Asp Leu Trp His His  
85 90 95

Asn Val Ile Gln Thr Leu Glu Thr Pro Phe Arg Glu Ser Ser Thr Tyr  
100 105 110

Gln Glu Arg Ala Asp Glu Leu Val Val Lys Ile Lys Asp Met Phe Asn  
115 120 125

Ala Leu Gly Asp Gly Asp Ile Ser Pro Ser Ala Tyr Asp Thr Ala Trp  
130 135 140

Val Ala Arg Leu Ala Thr Ile Ser Ser Asp Gly Ser Glu Lys Pro Arg  
145 150 155 160

Phe Pro Gln Ala Leu Asn Trp Val Phe Asn Asn Gln Leu Gln Asp Gly  
165 170 175

Ser Trp Gly Ile Glu Ser His Phe Ser Leu Cys Asp Arg Leu Leu Asn  
180 185 190

Thr Thr Asn Ser Val Ile Ala Leu Ser Val Trp Lys Thr Gly His Ser  
195 200 205

Gln Val Gln Gln Gly Ala Glu Phe Ile Ala Glu Asn Leu Arg Leu Leu  
210 215 220

Asn Glu Glu Asp Glu Leu Ser Pro Asp Phe Gln Ile Ile Phe Pro Ala  
225 230 235 240

Leu Leu Gln Lys Ala Lys Ala Leu Gly Ile Asn Leu Pro Tyr Asp Leu  
245 250 255

Pro Phe Ile Lys Tyr Leu Ser Thr Thr Arg Glu Ala Arg Leu Thr Asp  
260 265 270

Val Ser Ala Ala Ala Asp Asn Ile Pro Ala Asn Met Leu Asn Ala Leu  
275 280 285

Glu Gly Leu Glu Glu Val Ile Asp Trp Asn Lys Ile Met Arg Phe Gln  
290 295 300

Ser Lys Asp Gly Ser Phe Leu Ser Ser Pro Ala Ser Thr Ala Cys Val  
305 310 315 320

Leu Met Asn Thr Gly Asp Glu Lys Cys Phe Thr Phe Leu Asn Asn Leu  
325 330 335

Leu Asp Lys Phe Gly Gly Cys Val Pro Cys Met Tyr Ser Ile Asp Leu  
340 345 350

Leu Glu Arg Leu Ser Leu Val Asp Asn Ile Glu His Leu Gly Ile Gly  
355 360 365

Arg His Phe Lys Gln Glu Ile Lys Gly Ala Leu Asp Tyr Val Tyr Arg  
370 375 380

His Trp Ser Glu Arg Gly Ile Gly Trp Gly Arg Asp Ser Leu Val Pro  
385 390 395 400

Asp Leu Asn Thr Thr Ala Leu Gly Leu Arg Thr Leu Arg Met His Gly  
405 410 415

Tyr Asn Val Ser Ser Asp Val Leu Asn Asn Phe Lys Asp Glu Asn Gly  
420 425 430

Arg Phe Phe Ser Ser Ala Gly Gln Thr His Val Glu Leu Arg Ser Val  
435 440 445

Val Asn Leu Phe Arg Ala Ser Asp Leu Ala Phe Pro Asp Glu Arg Ala  
450 455 460

Met Asp Asp Ala Arg Lys Phe Ala Glu Pro Tyr Leu Arg Glu Ala Leu  
465 470 475 480

Ala Thr Lys Ile Ser Thr Asn Thr Lys Leu Phe Lys Glu Ile Glu Tyr  
485 490 495

Val Val Glu Tyr Pro Trp His Met Ser Ile Pro Arg Leu Glu Ala Arg  
500 505 510

Ser Tyr Ile Asp Ser Tyr Asp Asp Asn Tyr Val Trp Gln Arg Lys Thr  
515 520 525

Leu Tyr Arg Met Pro Ser Leu Ser Asn Ser Lys Cys Leu Glu Leu Ala  
530 535 540

Lys Leu Asp Phe Asn Ile Val Gln Ser Leu His Gln Glu Glu Leu Lys  
545 550 555 560

Leu Leu Thr Arg Trp Trp Lys Glu Ser Gly Met Ala Asp Ile Asn Phe  
565 570 575

Thr Arg His Arg Val Ala Glu Val Tyr Phe Ser Ser Ala Thr Phe Glu  
580 585 590

Pro Glu Tyr Ser Ala Thr Arg Ile Ala Phe Thr Lys Ile Gly Cys Leu  
595 600 605

Gln Val Leu Phe Asp Asp Met Ala Asp Ile Phe Ala Thr Leu Asp Glu  
610 615 620

Leu Lys Ser Phe Thr Glu Gly Val Lys Arg Trp Asp Thr Ser Leu Leu  
625 630 635 640

His Glu Ile Pro Glu Cys Met Gln Thr Cys Phe Lys Val Trp Phe Lys

645

650

655

Leu Met Glu Glu Val Asn Asn Asp Val Val Lys Val Gln Gly Arg Asp  
660 665 670

Met Leu Ala His Ile Arg Lys Pro Trp Glu Leu Tyr Phe Asn Cys Tyr  
675 680 685

Val Gln Glu Arg Glu Trp Leu Glu Ala Gly Tyr Ile Pro Thr Phe Glu  
690 695 700

Glu Tyr Leu Lys Thr Tyr Ala Ile Ser Val Gly Leu Gly Pro Cys Thr  
705 710 715 720

Leu Gln Pro Ile Leu Leu Met Gly Glu Leu Val Lys Asp Asp Val Val  
725 730 735

Glu Lys Val His Tyr Pro Ser Asn Met Phe Glu Leu Val Ser Leu Ser  
740 745 750

Trp Arg Leu Thr Asn Asp Thr Lys Thr Tyr Gln Ala Glu Lys Ala Arg  
755 760 765

Gly Gln Gln Ala Ser Gly Ile Ala Cys Tyr Met Lys Asp Asn Pro Gly  
770 775 780

Ala Thr Glu Glu Asp Ala Ile Lys His Ile Cys Arg Val Val Asp Arg  
785 790 795 800

Ala Leu Lys Glu Ala Ser Phe Glu Tyr Phe Lys Pro Ser Asn Asp Ile  
805 810 815

Pro Met Gly Cys Lys Ser Phe Ile Phe Asn Leu Arg Leu Cys Val Gln  
820 825 830

Ile Phe Tyr Lys Phe Ile Asp Gly Tyr Gly Ile Ala Asn Glu Glu Ile  
835 840 845

Lys Asp Tyr Ile Arg Lys Val Tyr Ile Asp Pro Ile Gln Val  
850 855 860

<210> 387  
<211> 946  
<212> PRT  
<213> Phaeosphaeria sp.

<400> 387

Met Phe Ala Lys Phe Asp Met Leu Glu Glu Glu Ala Arg Ala Leu Val  
1 5 10 15

Arg Lys Val Gly Asn Ala Val Asp Pro Ile Tyr Gly Phe Ser Thr Thr  
20 25 30

Ser Cys Gln Ile Tyr Asp Thr Ala Trp Ala Ala Met Ile Ser Lys Glu  
35 40 45

Glu His Gly Asp Lys Val Trp Leu Phe Pro Glu Ser Phe Lys Tyr Leu  
50 55 60

Leu Glu Lys Gln Gly Glu Asp Gly Ser Trp Glu Arg His Pro Arg Ser  
65 70 75 80

Lys Thr Val Gly Val Leu Asn Thr Ala Ala Ala Cys Leu Ala Leu Leu  
85 90 95

Arg His Val Lys Asn Pro Leu Gln Leu Gln Asp Ile Ala Ala Gln Asp  
100 105 110

Ile Glu Leu Arg Ile Gln Arg Gly Leu Arg Ser Leu Glu Glu Gln Leu  
115 120 125

Ile Ala Trp Asp Asp Val Leu Asp Thr Asn His Ile Gly Val Glu Met  
130 135 140

Ile Val Pro Ala Leu Leu Asp Tyr Leu Gln Ala Glu Asp Glu Asn Val  
145 150 155 160

Asp Phe Glu Phe Glu Ser His Ser Leu Leu Met Gln Met Tyr Lys Glu  
165 170 175

Lys Met Ala Arg Phe Ser Pro Glu Ser Leu Tyr Arg Ala Arg Pro Ser  
180 185 190

Ser Ala Leu His Asn Leu Glu Ala Leu Ile Gly Lys Leu Asp Phe Asp  
195 200 205

Lys Val Gly His His Leu Tyr Asn Gly Ser Met Met Ala Ser Pro Ser  
210 215 220

Ser Thr Ala Ala Phe Leu Met His Ala Ser Pro Trp Ser His Glu Ala  
225 230 235 240

Glu Ala Tyr Leu Arg His Val Phe Glu Ala Gly Thr Gly Lys Gly Ser  
245 250 255

Gly Gly Phe Pro Gly Thr Tyr Pro Thr Thr Tyr Phe Glu Leu Asn Trp  
260 265 270

Val Leu Ser Thr Leu Met Lys Ser Gly Phe Thr Leu Ser Asp Leu Glu  
275 280 285

Cys Asp Glu Leu Ser Ser Ile Ala Asn Thr Ile Ala Glu Gly Phe Glu  
290 295 300

Cys Asp His Gly Val Ile Gly Phe Ala Pro Arg Ala Val Asp Val Asp  
305 310 315 320

Asp Thr Ala Lys Gly Leu Leu Thr Leu Thr Leu Leu Gly Met Asp Glu  
325 330 335

Gly Val Ser Pro Ala Pro Met Ile Ala Met Phe Glu Ala Lys Asp His  
340 345 350

Phe Leu Thr Phe Leu Gly Glu Arg Asp Pro Ser Phe Thr Ser Asn Cys  
355 360 365

His Val Leu Leu Ser Leu Leu His Arg Thr Asp Leu Leu Gln Tyr Leu  
370 375 380

Pro Gln Ile Arg Lys Thr Thr Phe Leu Cys Glu Ala Trp Trp Ala  
385 390 395 400

Cys Asp Gly Gln Ile Lys Asp Lys Trp His Leu Ser His Leu Tyr Pro  
405 410 415

Thr Met Leu Met Val Gln Ala Phe Ala Glu Ile Leu Leu Lys Ser Ala  
420 425 430

Glu Gly Glu Pro Leu His Asp Ala Phe Asp Ala Ala Thr Leu Ser Arg  
435 440 445

Val Ser Ile Cys Val Phe Gln Ala Cys Leu Arg Thr Leu Leu Ala Gln  
450 455 460

Ser Gln Asp Gly Ser Trp His Gly Gln Pro Glu Ala Ser Cys Tyr Ala  
465 470 475 480

Val Leu Thr Leu Ala Glu Ser Gly Arg Leu Val Leu Leu Gln Ala Leu

485

490

495

Gln Pro Gln Ile Ala Ala Ala Met Glu Lys Ala Ala Asp Val Met Gln  
500 505 510

Ala Gly Arg Trp Ser Cys Ser Asp His Asp Cys Asp Trp Thr Ser Lys  
515 520 525

Thr Ala Tyr Arg Val Asp Leu Val Ala Ala Ala Tyr Arg Leu Ala Ala  
530 535 540

Met Lys Ala Ser Ser Asn Leu Thr Phe Thr Val Asp Asp Asn Val Ser  
545 550 555 560

Lys Arg Ser Asn Gly Phe Gln Gln Leu Val Gly Arg Thr Asp Leu Phe  
565 570 575

Ser Gly Val Pro Ala Trp Glu Leu Gln Ala Ser Phe Leu Glu Ser Ala  
580 585 590

Leu Phe Val Pro Leu Leu Arg Asn His Arg Leu Asp Val Phe Asp Arg  
595 600 605

Asp Asp Ile Lys Val Ser Lys Asp His Tyr Leu Asp Met Ile Pro Phe  
610 615 620

Thr Trp Val Gly Cys Asn Asn Arg Ser Arg Thr Tyr Val Ser Thr Ser  
625 630 635 640

Phe Leu Phe Asp Met Met Ile Ile Ser Met Leu Gly Tyr Gln Ile Asp  
645 650 655

Glu Phe Phe Glu Ala Glu Ala Ala Pro Ala Phe Ala Gln Cys Ile Gly  
660 665 670

Gln Leu His Gln Val Val Asp Lys Val Val Asp Glu Val Ile Asp Glu  
675 680 685

Val Val Asp Lys Val Val Gly Lys Val Val Gly Lys Val Val Gly Lys  
690 695 700

Val Val Asp Glu Arg Val Asp Ser Pro Thr His Glu Ala Ile Ala Ile  
705 710 715 720

Cys Asn Ile Glu Ala Ser Leu Arg Arg Phe Val Asp His Val Leu His  
725 730 735

His Gln His Val Leu His Ala Ser Gln Gln Glu Gln Asp Ile Leu Trp  
740 745 750

Arg Glu Leu Arg Ala Phe Leu His Ala His Val Val Gln Met Ala Asp  
755 760 765

Asn Ser Thr Leu Ala Pro Pro Gly Arg Thr Phe Phe Asp Trp Val Arg  
770 775 780

Thr Thr Ala Ala Asp His Val Ala Cys Ala Tyr Ser Phe Ala Phe Ala  
785 790 795 800

Cys Cys Ile Thr Ser Ala Thr Ile Gly Gln Gly Gln Ser Met Phe Ala  
805 810 815

Thr Val Asn Glu Leu Tyr Leu Val Gln Ala Ala Ala Arg His Met Thr  
820 825 830

Thr Met Cys Arg Met Cys Asn Asp Ile Gly Ser Val Asp Arg Asp Phe  
835 840 845

Ile Glu Ala Asn Ile Asn Ser Val His Phe Pro Glu Phe Ser Thr Leu  
850 855 860

Ser Leu Val Ala Asp Lys Lys Lys Ala Leu Ala Arg Leu Ala Ala Tyr  
865 870 875 880

Glu Lys Ser Cys Leu Thr His Thr Leu Asp Gln Phe Glu Asn Glu Val  
885 890 895

Leu Gln Ser Pro Arg Val Ser Ser Ala Ala Ser Gly Asp Phe Arg Thr  
900 905 910

Arg Lys Val Ala Val Val Arg Phe Phe Ala Asp Val Thr Asp Phe Tyr  
915 920 925

Asp Gln Leu Tyr Ile Leu Arg Asp Leu Ser Ser Ser Leu Lys His Val  
930 935 940

Gly Thr  
945

<210> 388  
<211> 868  
<212> PRT

<213> *Abies grandis*

<400> 388

Met Ala Met Pro Ser Ser Ser Leu Ser Ser Gln Ile Pro Thr Ala Ala  
1 5 10 15

His His Leu Thr Ala Asn Ala Gln Ser Ile Pro His Phe Ser Thr Thr  
20 25 30

Leu Asn Ala Gly Ser Ser Ala Ser Lys Arg Arg Ser Leu Tyr Leu Arg  
35 40 45

Trp Gly Lys Gly Ser Asn Lys Ile Ile Ala Cys Val Gly Glu Gly Gly  
50 55 60

Ala Thr Ser Val Pro Tyr Gln Ser Ala Glu Lys Asn Asp Ser Leu Ser  
65 70 75 80

Ser Ser Thr Leu Val Lys Arg Glu Phe Pro Pro Gly Phe Trp Lys Asp  
85 90 95

Asp Leu Ile Asp Ser Leu Thr Ser Ser His Lys Val Ala Ala Ser Asp  
100 105 110

Glu Lys Arg Ile Glu Thr Leu Ile Ser Glu Ile Lys Asn Met Phe Arg  
115 120 125

Cys Met Gly Tyr Gly Glu Thr Asn Pro Ser Ala Tyr Asp Thr Ala Trp  
130 135 140

Val Ala Arg Ile Pro Ala Val Asp Gly Ser Asp Asn Pro His Phe Pro  
145 150 155 160

Glu Thr Val Glu Trp Ile Leu Gln Asn Gln Leu Lys Asp Gly Ser Trp  
165 170 175

Gly Glu Gly Phe Tyr Phe Leu Ala Tyr Asp Arg Ile Leu Ala Thr Leu  
180 185 190

Ala Cys Ile Ile Thr Leu Thr Leu Trp Arg Thr Gly Glu Thr Gln Val  
195 200 205

Gln Lys Gly Ile Glu Phe Phe Arg Thr Gln Ala Gly Lys Met Glu Asp  
210 215 220

Glu Ala Asp Ser His Arg Pro Ser Gly Phe Glu Ile Val Phe Pro Ala

225

230

235

240

Met Leu Lys Glu Ala Lys Ile Leu Gly Leu Asp Leu Pro Tyr Asp Leu  
245 250 255

Pro Phe Leu Lys Gln Ile Ile Glu Lys Arg Glu Ala Lys Leu Lys Arg  
260 265 270

Ile Pro Thr Asp Val Leu Tyr Ala Leu Pro Thr Thr Leu Leu Tyr Ser  
275 280 285

Leu Glu Gly Leu Gln Glu Ile Val Asp Trp Gln Lys Ile Met Lys Leu  
290 295 300

Gln Ser Lys Asp Gly Ser Phe Leu Ser Ser Pro Ala Ser Thr Ala Ala  
305 310 315 320

Val Phe Met Arg Thr Gly Asn Lys Lys Cys Leu Asp Phe Leu Asn Phe  
325 330 335

Val Leu Lys Lys Phe Gly Asn His Val Pro Cys His Tyr Pro Leu Asp  
340 345 350

Leu Phe Glu Arg Leu Trp Ala Val Asp Thr Val Glu Arg Leu Gly Ile  
355 360 365

Asp Arg His Phe Lys Glu Glu Ile Lys Glu Ala Leu Asp Tyr Val Tyr  
370 375 380

.  
Ser His Trp Asp Glu Arg Gly Ile Gly Trp Ala Arg Glu Asn Pro Val  
385 390 395 400

Pro Asp Ile Asp Asp Thr Ala Met Gly Leu Arg Ile Leu Arg Leu His  
405 410 415

Gly Tyr Asn Val Ser Ser Asp Val Leu Lys Thr Phe Arg Asp Glu Asn  
420 425 430

Gly Glu Phe Phe Cys Phe Leu Gly Gln Thr Gln Arg Gly Val Thr Asp  
435 440 445

Met Leu Asn Val Asn Arg Cys Ser His Val Ser Phe Pro Gly Glu Thr  
450 455 460

Ile Met Glu Glu Ala Lys Leu Cys Thr Glu Arg Tyr Leu Arg Asn Ala  
465 470 475 480

Leu Glu Asn Val Asp Ala Phe Asp Lys Trp Ala Phe Lys Lys Asn Ile  
485 490 495

Arg Gly Glu Val Glu Tyr Ala Leu Lys Tyr Pro Trp His Lys Ser Met  
500 505 510

Pro Arg Leu Glu Ala Arg Ser Tyr Ile Glu Asn Tyr Gly Pro Asp Asp  
515 520 525

Val Trp Leu Gly Lys Thr Val Tyr Met Met Pro Tyr Ile Ser Asn Glu  
530 535 540

Lys Tyr Leu Glu Leu Ala Lys Leu Asp Phe Asn Lys Val Gln Ser Ile  
545 550 555 560

His Gln Thr Glu Leu Gln Asp Leu Arg Arg Trp Trp Lys Ser Ser Gly  
565 570 575

Phe Thr Asp Leu Asn Phe Thr Arg Glu Arg Val Thr Glu Ile Tyr Phe  
580 585 590

Ser Pro Ala Ser Phe Ile Phe Glu Pro Glu Phe Ser Lys Cys Arg Glu  
595 600 605

Val Tyr Thr Lys Thr Ser Asn Phe Thr Val Ile Leu Asp Asp Leu Tyr  
610 615 620

Asp Ala His Gly Ser Leu Asp Asp Leu Lys Leu Phe Thr Glu Ser Val  
625 630 635 640

Lys Arg Trp Asp Leu Ser Leu Val Asp Gln Met Pro Gln Gln Met Lys  
645 650 655

Ile Cys Phe Val Gly Phe Tyr Asn Thr Phe Asn Asp Ile Ala Lys Glu  
660 665 670

Gly Arg Glu Arg Gln Gly Arg Asp Val Leu Gly Tyr Ile Gln Asn Val  
675 680 685

Trp Lys Val Gln Leu Glu Ala Tyr Thr Lys Glu Ala Glu Trp Ser Glu  
690 695 700

Ala Lys Tyr Val Pro Ser Phe Asn Glu Tyr Ile Glu Asn Ala Ser Val  
705 710 715 720

Ser Ile Ala Leu Gly Thr Val Val Leu Ile Ser Ala Leu Phe Thr Gly  
725 730 735

Glu Val Leu Thr Asp Glu Val Leu Ser Lys Ile Asp Arg Glu Ser Arg  
740 745 750

Phe Leu Gln Leu Met Gly Leu Thr Gly Arg Leu Val Asn Asp Thr Lys  
755 760 765

Thr Tyr Gln Ala Glu Arg Gly Gln Gly Glu Val Ala Ser Ala Ile Gln  
770 775 780

Cys Tyr Met Lys Asp His Pro Lys Ile Ser Glu Glu Ala Leu Gln  
785 790 795 800

His Val Tyr Ser Val Met Glu Asn Ala Leu Glu Glu Leu Asn Arg Glu  
805 810 815

Phe Val Asn Asn Lys Ile Pro Asp Ile Tyr Lys Arg Leu Val Phe Glu  
820 825 830

Thr Ala Arg Ile Met Gln Leu Phe Tyr Met Gln Gly Asp Gly Leu Thr  
835 840 845

Leu Ser His Asp Met Glu Ile Lys Glu His Val Lys Asn Cys Leu Phe  
850 855 860

Gln Pro Val Ala  
865

<210> 389  
<211> 785  
<212> PRT  
<213> Cucumis sativus

<400> 389

Met Asn Leu Ser Arg Pro Thr Asn Leu Gly Cys Phe Thr Ala Ser Ser  
1 5 10 15

Ser Ala Ser Leu Phe Pro Gly Leu Asp Val Gly Thr Lys Thr Lys Thr  
20 25 30

Gly Ala Leu Arg Phe Glu Glu Thr Lys Glu Arg Ile Lys Lys Leu Phe  
35 40 45

Lys Asn Val Glu Leu Ser Ile Ser Ala Tyr Asp Thr Ala Trp Val Ala

50

55

60

Met Val Pro Ser Pro Asn Ser Leu Asn Lys Pro Leu Phe Pro Glu Cys  
65                   70                   75                   80

Ile Asn Trp Val Leu Asp His Gln Asn Pro Asp Gly Ser Trp Gly Ile  
85                   90                   95

Leu His Asp His Gln Leu Val Met Lys Ala Thr Leu Leu Ser Thr Leu  
100               105               110

Ala Cys Val Leu Thr Leu Lys Arg Trp Asp Ile Gly Asp Asp His Met  
115               120               125

Ser Lys Ala Leu Ser Phe Ile Lys Ser Asn Ile Ala Ser Ala Thr Asp  
130               135               140

Glu Asn Gln Arg Ser Pro Val Gly Phe Asp Ile Ile Phe Pro Gly Met  
145               150               155               160

Ile Glu Tyr Ala Lys Asp Leu Asn Leu Asn Leu Pro Leu Ala Ser Met  
165               170               175

Asn Val Asp Ala Leu Val Gln Lys Lys Glu Leu Glu Leu Arg Ser Cys  
180               185               190

Cys Ser Asn Ser Glu Gly Gly Lys Ala Tyr Leu Ala Tyr Val Ser Glu  
195               200               205

Gly Ile Gly Lys Leu Gln Asp Trp Glu Met Val Met Arg Tyr Gln Arg  
210               215               220

Lys Asn Gly Ser Leu Phe Ser Ser Pro Ser Thr Thr Ala Val Ala Phe  
225               230               235               240

Met His Arg Asn Asp Asp Gly Cys Phe Asn Tyr Leu Arg Ser Val Leu  
245               250               255

Gln Lys Phe His Ser Ser Val Pro Ala Ile Tyr Pro Leu Asp Ile Tyr  
260               265               270

Ala Arg Leu His Met Val Asp Ser Leu Gln Lys Leu Gly Ile Asp Gly  
275               280               285

His Phe Lys Asp Glu Ile Arg Ser Val Leu Asp Glu Thr Tyr Ser Cys  
290               295               300

Trp Met Gln Gly Glu Glu Asn Ile Phe Leu Asp Ala Ser Thr Cys Ala  
305 310 315 320

Met Ala Phe Arg Met Leu Arg Val Glu Gly Tyr Asp Val Ser Ser Asp  
325 330 335

Gln Leu Thr Gln Phe Ser Glu Gly Leu Phe Ser Asn Cys Leu Gly Gly  
340 345 350

His Leu Lys Asp Phe Ser Ala Ser Leu Glu Leu Phe Lys Ala Ser Gln  
355 360 365

Ile Ile Ile Tyr Pro Asp Glu Phe Ile Leu Glu Asn Ile Asn Ser Trp  
370 375 380

Thr Ser Arg Phe Leu Asn His Gly Leu Ser Ser Gly Ser Val His Ser  
385 390 395 400

Asp Arg Thr Glu Arg Leu Val Lys Gln Glu Ala Val Asn Ala Phe Glu  
405 410 415

Phe Pro Tyr Asn Ser Thr Leu Glu Arg Leu Ser Asn Lys Arg Ala Leu  
420 425 430

Glu Ser Tyr Ser Gly Asp Ile Val Arg Ile Ser Lys Thr Ala Tyr Ala  
435 440 445

Cys Leu Asn Phe Gly His Gln Asp Phe Leu Glu Leu Ala Val Glu Asp  
450 455 460

Phe Asn Thr Leu Gln Gly Ile His Arg Lys Glu Leu Lys Glu Leu Glu  
465 470 475 480

Lys Trp Val Ile Glu Asn Lys Leu Asp Lys Leu Lys Phe Ala Arg Gln  
485 490 495

Lys Leu Ala Tyr Cys Tyr Phe Ser Ala Ala Ala Thr Leu Thr Ser Pro  
500 505 510

Glu Leu Cys Asp Ala Arg Leu Ser Trp Ala Lys Asn Gly Val Leu Thr  
515 520 525

Thr Val Val Asp Asp Phe Phe Asp Val Gly Gly Ser Glu Glu Glu Leu  
530 535 540

Val Asn Leu Ile Gln Leu Val Glu Lys Trp Asp Ala Ser Gly Glu Thr  
545 550 555 560

Gly Tyr Cys Ser Lys Glu Val Glu Ile Ile Phe Leu Ala Leu His Ser  
565 570 575

Thr Ile Cys Glu Ile Gly Lys Lys Ala Leu Pro Trp Gln Gly Arg Ser  
580 585 590

Val Met Arg Asn Val Ile Asp Ile Trp Leu Ala Leu Leu Glu Ser Met  
595 600 605

Arg Lys Glu Ala Glu Trp Leu Lys Asn Lys Val Val Pro Ser Leu Asp  
610 615 620

Glu Tyr Met Glu Asn Gly Tyr Val Ser Phe Ala Leu Gly Pro Ile Val  
625 630 635 640

Leu Pro Thr Leu Tyr Phe Val Gly Pro Lys Leu Pro Glu Glu Ile Val  
645 650 655

Gly Asn Cys Glu Tyr Lys Lys Leu Phe Lys Leu Met Ser Thr Ser Gly  
660 665 670

Arg Leu Leu Asn Asp Thr Arg Thr Phe Asp Arg Glu Ser Ser Glu Gly  
675 680 685

Lys Leu Asn Ala Leu Ser Leu Tyr Met Ile Ser Ala Gly Gly Lys Leu  
690 695 700

Thr Lys Glu Glu Ala Thr Glu Ala Met Lys Gly Asp Val Asp Arg Thr  
705 710 715 720

Arg Arg Glu Leu Leu Arg Leu Val Leu Gln Glu Asn Ser Thr Ile Pro  
725 730 735

Arg Ala Cys Lys Asp Leu Phe Trp Lys Met Ser Cys Val Val His Leu  
740 745 750

Phe Tyr Arg Lys Asp Asp Gly Phe Thr Ser His Glu Leu Met Asn Ser  
755 760 765

Ala Lys Ala Leu Phe Glu Gln Pro Met Val Leu Asp Glu Leu Leu Asn  
770 775 780

Lys  
785

<210> 390  
<211> 788  
<212> PRT  
<213> Lactuca sativa

<400> 390

Met Asn Ile Ala Gln Ile Thr Ser Ser Ala Met Leu Val Pro Ser Ser  
1 5 10 15

His Ile Pro His Arg Ser Trp Val Val Asn Cys Cys Met Val Gln Tyr  
20 25 30

Asn Pro Ser Gly Leu Arg Thr Ala Ser Ser Gln Ala Gly Gln Val Asn  
35 40 45

Pro Thr Val Met Thr Leu Asp Val Thr Lys Glu Arg Ile Arg Lys Leu  
50 55 60

Phe Asn Asn Val Glu Val Ser Val Ser Ser Tyr Asp Thr Ala Trp Val  
65 70 75 80

Ala Met Val Pro Ser Pro Asn Ser Pro Lys Ser Pro Cys Phe Pro Asp  
85 90 95

Cys Leu Asn Trp Leu Leu Asp Asn Gln Leu Asp Asp Gly Ser Trp Gly  
100 105 110

Leu Leu Pro His Gln Ser Pro Leu Ile Lys Asp Thr Leu Ser Ser Thr  
115 120 125

Leu Ala Cys Val Leu Ala Leu Lys Arg Trp Asn Val Gly Lys Asp Gln  
130 135 140

Ile Asn Lys Gly Leu His Tyr Ile Glu Ser Asn Phe Ala Ser Val Thr  
145 150 155 160

Asp Lys Asn Gln Ala Ser Pro Phe Gly Phe Asp Ile Ile Phe Pro Gly  
165 170 175

Met Leu Glu Tyr Ala Lys Asp Leu Asp Ile Lys Leu Pro Leu Asn Gln  
180 185 190

Thr His Leu Ser Val Met Leu His Glu Arg Glu Leu Glu Leu Arg Arg  
195 200 205

Cys His Ser Asn Gly Arg Glu Ala Tyr Leu Ala Tyr Ile Ser Glu Gly  
210 215 220

Leu Gly Asn Leu Asn Asp Trp Asn Met Val Met Lys Tyr Gln Met Lys  
225 230 235 240

Asn Gly Ser Leu Phe Asn Ser Pro Ser Ala Thr Ala Ser Val Leu Ile  
245 250 255

His His Gln Asn Ala Gly Cys Leu His Tyr Leu Thr Ser Leu Leu Asp  
260 265 270

Lys Phe Gly Asn Ala Val Pro Thr Val Tyr Pro Ile Asp Leu Tyr Val  
275 280 285

Arg Leu Ser Met Val Asp Thr Leu Glu Arg Leu Gly Ile Lys Arg His  
290 295 300

Phe Met Val Glu Ile Gln Asn Val Leu Asp Glu Thr Tyr Arg Cys Trp  
305 310 315 320

Val Gln Gly Asp Val Gln Ile Phe Met Asp Val Val Thr Cys Ala Leu  
325 330 335

Ala Phe Arg Val Leu Arg Ser Asn Gly Tyr Glu Val Ser Ser Asp Pro  
340 345 350

Leu Ala Lys Ile Thr Lys Glu Gly Asp Tyr Met Asn Ser Pro Glu Lys  
355 360 365

Pro Phe Lys Asp Val Tyr Thr Ser Leu Glu Val Tyr Lys Ala Ser Gln  
370 375 380

Ile Ile Tyr Gln Glu Glu Leu Ala Phe Arg Glu Gln Asn Leu Thr Ser  
385 390 395 400

Tyr Leu Pro Ser Ser Asn Lys Leu Ser Asn Tyr Ile Leu Lys Glu Val  
405 410 415

Asp Asp Ala Leu Lys Phe Pro Phe Asn Gly Ser Leu Glu Arg Met Ser  
420 425 430

Thr Arg Arg Asn Ile Glu His Tyr Asn Leu Asn His Thr Arg Ile Leu  
435 440 445

Lys Thr Thr Tyr Ser Ser Ser Asn Ile Ser Asn Lys Asp Tyr Leu Lys  
450 455 460

Leu Ala Val Gln Asp Phe Asn Glu Cys Gln Ser Ile Tyr Cys Glu Glu  
465 470 475 480

Leu Lys Asp Leu Glu Arg Trp Val Val Glu Asn Arg Leu Asp Lys Leu  
485 490 495

Lys Phe Ala Arg Gln Lys Thr Ala Tyr Cys Tyr Phe Ser Ala Ala Ser  
500 505 510

Phe Leu Ser Ser Pro Asp Leu Ser Asp Ala Arg Ile Ser Trp Ala Lys  
515 520 525

Ser Ser Ile Leu Thr Thr Val Ile Asp Asp Phe Phe Asp Val Gly Gly  
530 535 540

Ser Met Asp Glu Leu Val Asn Phe Val His Ile Ile Glu Lys Trp Asn  
545 550 555 560

Val Asn Val Glu Asn Asp Cys Cys Ser Glu Glu Val Gly Val Leu Phe  
565 570 575

Leu Ala Leu Lys Asp Ala Val Cys Trp Ile Gly Asp Lys Ala Phe Lys  
580 585 590

Ile Gln Glu Arg Asn Ile Thr Ser His Val Ile Glu Ile Trp Leu Asp  
595 600 605

Leu Val Lys Ser Met Leu Arg Glu Ala Ile Trp Ala Lys Asp Gly Ser  
610 615 620

Ile Pro Thr Ile Asn Glu Tyr Met Glu Asn Gly Tyr Val Ser Phe Ala  
625 630 635 640

Leu Gly Pro Ile Val Leu Pro Thr Leu Tyr Phe Leu Gly Val Lys Leu  
645 650 655

Ser Glu Glu Val Val Gln Ser Ser Glu Tyr His Lys Leu Tyr Glu Val  
660 665 670

Met Ser Thr Gln Gly Arg Leu Met Asn Asp Ile His Ser Phe Lys Arg  
675 680 685

Glu Lys Lys Ala Gly Lys Leu Asn Ala Val Ala Leu Tyr Met Ser Asp  
690 695 700

Gly Lys Ser Gly Ser Val Glu Glu Glu Val Val Glu Glu Met Lys Ile  
705 710 715 720

Leu Thr Lys Ser Gln Arg Lys Glu Met Met Lys Leu Val Leu Glu Thr  
725 730 735

Lys Gly Ser Val Val Pro Arg Val Cys Lys Asp Val Phe Trp Asn Met  
740 745 750

Cys Asn Val Leu Asn Leu Phe Tyr Ala Thr Asp Asp Gly Phe Thr Gly  
755 760 765

Asn Ala Ile Leu Asp Val Val Lys Glu Ile Ile Tyr Glu Pro Val Ser  
770 775 780

His Glu Leu Ile  
785

<210> 391  
<211> 952  
<212> PRT  
<213> Gibberella fujikuroi

<400> 391

Met Pro Gly Lys Ile Glu Asn Gly Thr Pro Lys Asp Leu Lys Thr Gly  
1 5 10 15

Asn Asp Phe Val Ser Ala Ala Lys Ser Leu Leu Asp Arg Ala Phe Lys  
20 25 30

Ser His His Ser Tyr Tyr Gly Leu Cys Ser Thr Ser Cys Gln Val Tyr  
35 40 45

Asp Thr Ala Trp Val Ala Met Ile Pro Lys Thr Arg Asp Asn Val Lys  
50 55 60

Gln Trp Leu Phe Pro Glu Cys Phe His Tyr Leu Leu Lys Thr Gln Ala  
65 70 75 80

Ala Asp Gly Ser Trp Gly Ser Leu Pro Thr Thr Gln Thr Ala Gly Ile  
85 90 95

Leu Asp Thr Ala Ser Ala Val Leu Ala Leu Leu Cys His Ala Gln Glu  
100 105 110

Pro Leu Gln Ile Leu Asp Val Ser Pro Asp Glu Met Gly Leu Arg Ile  
115 120 125

Glu His Gly Val Thr Ser Leu Lys Arg Gln Leu Ala Val Trp Asn Asp  
130 135 140

Val Glu Asp Thr Asn His Ile Gly Val Glu Phe Ile Ile Pro Ala Leu  
145 150 155 160

Leu Ser Met Leu Glu Lys Glu Leu Asp Val Pro Ser Phe Glu Phe Pro  
165 170 175

Cys Arg Ser Ile Leu Glu Arg Met His Gly Glu Lys Leu Gly His Phe  
180 185 190

Asp Leu Glu Gln Val Tyr Gly Lys Pro Ser Ser Leu Leu His Ser Leu  
195 200 205

Glu Ala Phe Leu Gly Lys Leu Asp Phe Asp Arg Leu Ser His His Leu  
210 215 220

Tyr His Gly Ser Met Met Ala Ser Pro Ser Ser Thr Ala Ala Tyr Leu  
225 230 235 240

Ile Gly Ala Thr Lys Trp Asp Asp Glu Ala Glu Asp Tyr Leu Arg His  
245 250 255

Val Met Arg Asn Gly Ala Gly His Gly Asn Gly Gly Ile Ser Gly Thr  
260 265 270

Phe Pro Thr Thr His Phe Glu Cys Ser Trp Ile Ile Ala Thr Leu Leu  
275 280 285

Lys Val Gly Phe Thr Leu Lys Gln Ile Asp Gly Asp Gly Leu Arg Gly  
290 295 300

Leu Ser Thr Ile Leu Leu Glu Ala Leu Arg Asp Glu Asn Gly Val Ile  
305 310 315 320

Gly Phe Ala Pro Arg Thr Ala Asp Val Asp Asp Thr Ala Lys Ala Leu  
325 330 335

Leu Ala Leu Ser Leu Val Asn Gln Pro Val Ser Pro Asp Ile Met Ile  
340 345 350

Lys Val Phe Glu Gly Lys Asp His Phe Thr Thr Phe Gly Ser Glu Arg  
355 360 365

Asp Pro Ser Leu Thr Ser Asn Leu His Val Leu Leu Ser Leu Leu Lys  
370 375 380

Gln Ser Asn Leu Ser Gln Tyr His Pro Gln Ile Leu Lys Thr Thr Leu  
385 390 395 400

Phe Thr Cys Arg Trp Trp Trp Gly Ser Asp His Cys Val Lys Asp Lys  
405 410 415

Trp Asn Leu Ser His Leu Tyr Pro Thr Met Leu Leu Val Glu Ala Phe  
420 425 430

Thr Glu Val Leu His Leu Ile Asp Gly Gly Glu Leu Ser Ser Leu Phe  
435 440 445

Asp Glu Ser Phe Lys Cys Lys Ile Gly Leu Ser Ile Phe Gln Ala Val  
450 455 460

Leu Arg Ile Ile Leu Thr Gln Asp Asn Asp Gly Ser Trp Arg Gly Tyr  
465 470 475 480

Arg Glu Gln Thr Cys Tyr Ala Ile Leu Ala Leu Val Gln Ala Arg His  
485 490 495

Val Cys Phe Phe Thr His Met Val Asp Arg Leu Gln Ser Cys Val Asp  
500 505 510

Arg Gly Phe Ser Trp Leu Lys Ser Cys Ser Phe His Ser Gln Asp Leu  
515 520 525

Thr Trp Thr Ser Lys Thr Ala Tyr Glu Val Gly Phe Val Ala Glu Ala  
530 535 540

Tyr Lys Leu Ala Ala Leu Gln Ser Ala Ser Leu Glu Val Pro Ala Ala  
545 550 555 560

Thr Ile Gly His Ser Val Thr Ser Ala Val Pro Ser Ser Asp Leu Glu  
565 570 575

Lys Tyr Met Arg Leu Val Arg Lys Thr Ala Leu Phe Ser Pro Leu Asp  
580 585 590

Glu Trp Gly Leu Met Ala Ser Ile Ile Glu Ser Ser Phe Phe Val Pro  
595 600 605

Leu Leu Gln Ala Gln Arg Val Glu Ile Tyr Pro Arg Asp Asn Ile Lys  
610 615 620

Val Asp Glu Asp Lys Tyr Leu Ser Ile Ile Pro Phe Thr Trp Val Gly  
625 630 635 640

Cys Asn Asn Arg Ser Arg Thr Phe Ala Ser Asn Arg Trp Leu Tyr Asp  
645 650 655

Met Met Tyr Leu Ser Leu Leu Gly Tyr Gln Thr Asp Glu Tyr Met Glu  
660 665 670

Ala Val Ala Gly Pro Val Phe Gly Asp Val Ser Leu Leu His Gln Thr  
675 680 685

Ile Asp Lys Val Ile Asp Asn Thr Met Gly Asn Leu Ala Arg Ala Asn  
690 695 700

Gly Thr Val His Ser Gly Asn Gly His Gln His Glu Ser Pro Asn Ile  
705 710 715 720

Gly Gln Val Glu Asp Thr Leu Thr Arg Phe Thr Asn Ser Val Leu Asn  
725 730 735

His Lys Asp Val Leu Asn Ser Ser Ser Asp Gln Asp Thr Leu Arg  
740 745 750

Arg Glu Phe Arg Thr Phe Met His Ala His Ile Thr Gln Ile Glu Asp  
755 760 765

Asn Ser Arg Phe Ser Lys Gln Ala Ser Ser Asp Ala Phe Ser Ser Pro  
770 775 780

Glu Gln Ser Tyr Phe Gln Trp Val Asn Ser Thr Gly Gly Ser His Val  
785 790 795 800

Ala Cys Ala Tyr Ser Phe Ala Phe Ser Asn Cys Leu Met Ser Ala Asn  
805 810 815

Leu Leu Gln Gly Lys Asp Ala Phe Pro Ser Gly Thr Gln Lys Tyr Leu  
820 825 830

Ile Ser Ser Val Met Arg His Ala Thr Asn Met Cys Arg Met Tyr Asn

835

840

845

Asp Phe Gly Ser Ile Ala Arg Asp Asn Ala Glu Arg Asn Val Asn Ser  
850 855 860

Ile His Phe Pro Glu Phe Thr Leu Cys Asn Gly Thr Ser Gln Asn Leu  
865 870 875 880

Asp Glu Arg Lys Glu Arg Leu Leu Lys Ile Ala Thr Tyr Glu Gln Gly  
885 890 895

Tyr Leu Asp Arg Ala Leu Glu Ala Leu Glu Arg Gln Ser Arg Asp Asp  
900 905 910

Ala Gly Asp Arg Ala Gly Ser Lys Asp Met Arg Lys Leu Lys Ile Val  
915 920 925

Lys Leu Phe Cys Asp Val Thr Asp Leu Tyr Asp Gln Leu Tyr Val Ile  
930 935 940

Lys Asp Leu Ser Ser Ser Met Lys  
945 950

<210> 392  
<211> 458  
<212> PRT  
<213> Zea mays

<400> 392

Gly Tyr Asn Val Ser Ser Asp Glu Leu Tyr His Val Val Glu Ala Ser  
1 5 10 15

Gly Leu His Asn Ser Leu Gly Gly Tyr Leu Asn Asp Thr Arg Thr Leu  
20 25 30

Leu Glu Leu His Lys Ala Ser Thr Val Ser Ile Ser Glu Asp Glu Ser  
35 40 45

Ile Leu Asp Ser Ile Gly Ser Arg Ser Arg Thr Leu Leu Arg Glu Gln  
50 55 60

Leu Glu Ser Gly Gly Ala Leu Arg Lys Pro Ser Leu Phe Lys Glu Val  
65 70 75 80

Glu His Ala Leu Asp Gly Pro Phe Tyr Thr Thr Leu Asp Arg Leu His  
85 90 95

His Arg Trp Asn Ile Glu Asn Phe Asn Ile Ile Glu Gln His Met Leu  
100 105 110

Glu Thr Pro Tyr Leu Ser Asn Gln His Thr Ser Arg Asp Ile Leu Ala  
115 120 125

Leu Ser Ile Arg Asp Phe Ser Ser Ser Gln Phe Thr Tyr Gln Gln Glu  
130 135 140

Leu Gln His Leu Glu Ser Trp Val Lys Glu Cys Arg Leu Asp Gln Leu  
145 150 155 160

Gln Phe Ala Arg Gln Lys Leu Ala Tyr Phe Tyr Leu Ser Ala Ala Gly  
165 170 175

Thr Met Phe Ser Pro Glu Leu Ser Asp Ala Arg Thr Leu Trp Ala Lys  
180 185 190

Asn Gly Val Leu Thr Thr Ile Val Asp Asp Phe Phe Asp Val Ala Gly  
195 200 205

Ser Lys Glu Glu Leu Glu Asn Leu Val Met Leu Val Glu Met Trp Asp  
210 215 220

Glu His His Lys Val Glu Phe Tyr Ser Glu Gln Val Glu Ile Ile Phe  
225 230 235 240

Ser Ser Ile Tyr Asp Ser Val Asn Gln Leu Gly Glu Lys Ala Ser Leu  
245 250 255

Val Gln Asp Arg Ser Ile Thr Lys His Leu Val Glu Ile Trp Leu Asp  
260 265 270

Leu Leu Lys Ser Met Met Thr Glu Val Glu Trp Arg Leu Ser Lys Tyr  
275 280 285

Val Pro Thr Glu Lys Glu Tyr Met Ile Asn Ala Ser Leu Thr Phe Gly  
290 295 300

Leu Gly Pro Ile Val Leu Pro Ala Leu Tyr Phe Val Gly Pro Lys Ile  
305 310 315 320

Ser Glu Ser Ile Val Lys Asp Pro Glu Tyr Asp Glu Leu Phe Lys Leu  
325 330 335

Met Ser Thr Cys Gly Arg Leu Leu Asn Asp Val Gln Thr Phe Glu Arg  
340 345 350

Glu Tyr Asn Glu Gly Lys Leu Asn Ser Val Ser Leu Leu Val Leu His  
355 360 365

Gly Gly Ser Met Ser Ile Ser Asp Ala Lys Arg Lys Leu Gln Lys Pro  
370 375 380

Ile Asp Thr Cys Arg Arg Asp Leu Leu Ser Leu Val Leu Arg Glu Glu  
385 390 395 400

Ser Val Val Pro Arg Pro Cys Lys Glu Leu Phe Trp Lys Met Cys Lys  
405 410 415

Val Cys Tyr Phe Phe Tyr Ser Thr Thr Asp Gly Phe Ser Ser Gln Val  
420 425 430

Glu Arg Ala Lys Glu Val Asp Ala Val Ile Asn Glu Pro Leu Lys Leu  
435 440 445

Gln Gly Ser His Thr Leu Val Ser Asp Val  
450 455

<210> 393  
<211> 85  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 393

Met Thr Val Arg Ala Val Leu Arg Arg Thr Val Gly Ala Gln Trp Pro  
1 5 10 15

Ile Leu Ala Gly Val Asn Phe Trp Arg Arg Gly Ala Leu Leu Ile Gly  
20 25 30

Ile Gly Val Gly Val Ala Ala Val Leu Arg Leu Val Leu Ser Glu Glu  
35 40 45

Arg Ala Gly Leu Leu Val Val Arg Ser Lys Gly Ile Asp Phe Val Thr  
50 55 60

Thr Val Thr Val Ala Ala Ala Met Val Tyr Ile Ala Ser Thr Ile Asp  
65 70 75 80

Pro Leu Gly Thr Gly  
85

<210> 394  
<211> 801  
<212> PRT  
<213> Pisum sativum

<400> 394

Met Phe Thr His Phe Ser Thr His Phe His Leu Pro Ser Ser Ser Ser  
1 5 10 15

Leu Phe Phe Leu His Pro Phe Tyr Lys Ser Ser Ser Leu Gly Ala Val  
20 25 30

Ser Phe Val Ala Lys Asp Lys Glu Lys Arg Cys Arg Ala Ile Ser Lys  
35 40 45

Ser Arg Thr Gln Glu Tyr Glu Gly Val Phe Gln Thr Asn Val Ala Thr  
50 55 60

Leu Lys Leu Ser Glu Ile Asn Val Glu Asp Val Ile Val Ile Asp Asp  
65 70 75 80

Glu Glu Glu Gln Asp Ile Arg Val Gly Leu Val Asn Lys Ile Lys Ser  
85 90 95

Ile Leu Ser Ser Leu Glu Asp Gly Glu Ile Thr Ile Ser Ala Tyr Asp  
100 105 110

Thr Ala Trp Val Ala Leu Val Glu Asp Val Asn Ala Ile Ser Thr Pro  
115 120 125

Gln Phe Pro Ser Ser Leu Glu Trp Ile Ala Lys Asn Gln Leu Gln Asp  
130 135 140

Gly Ser Trp Gly Asp Ser Arg Leu Phe Ser Ala His Asp Arg Ile Ile  
145 150 155 160

Asn Thr Leu Ala Cys Val Ile Ala Leu Arg Ser Trp Asn Met His Ser  
165 170 175

Glu Lys Cys Asp Lys Gly Met Ile Phe Phe Arg Glu Asn Leu Ser Lys  
180 185 190

Leu Glu Asn Glu Asn Glu His Met Pro Ile Gly Phe Glu Val Ala  
195 200 205

Phe Pro Ser Leu Leu Glu Gly Ala Arg Gly Ile Lys Pro Leu Met Cys  
210 215 220

Pro Asn Asp Ser Pro Ile Leu Lys Asn Ile Phe Glu Lys Arg Asp Glu  
225 230 235 240

Lys Leu Thr Arg Ile Pro Lys Glu Ile Met His Lys Val Pro Thr Thr  
245 250 255

Leu Leu His Ser Leu Glu Gly Met Ser Gly Leu Asp Trp Lys Gln Leu  
260 265 270

Leu Lys Leu Gln Ser Gln Asp Gly Ser Phe Leu Phe Ser Pro Ser Ser  
275 280 285

Thr Ala Phe Ala Leu Met Gln Thr Lys Asp Gly Asn Cys Leu Lys Tyr  
290 295 300

Leu Asn Asn Val Val Lys Lys Phe Asn Gly Gly Val Pro Asn Val Tyr  
305 310 315 320

Pro Val Asp Leu Phe Glu His Ile Trp Val Val Asp Arg Leu Glu Arg  
325 330 335

Leu Gly Ile Ser Arg Phe Phe Arg His Glu Ile Lys Asp Cys Met Asn  
340 345 350

Tyr Val Ser Lys Ile Trp Ser Glu Lys Gly Ile Cys Trp Ala Arg Asn  
355 360 365

Ser Asn Val Gln Asp Ile Asp Asp Thr Ala Met Ala Phe Arg Leu Leu  
370 375 380

Arg Leu His Gly His Gln Val Ser Ala His Val Phe Lys His Phe Glu  
385 390 395 400

Arg Asn Gly Glu Phe Phe Cys Phe Ala Gly Gln Cys Thr Gln Ala Val  
405 410 415

Thr Gly Met Tyr Asn Leu Phe Arg Ala Ser Gln Val Leu Phe Pro Gly  
420 425 430

Glu Lys Ile Leu Glu His Ala Lys His Phe Ser Ala Lys Val Leu Lys  
435 440 445

Glu Lys Arg Glu Ala Asn Glu Leu Ile Asp Lys Trp Ile Ile Met Lys

450                    455                    460  
Asn Leu Pro Glu Glu Val Gly Tyr Ala Leu Asp Met Pro Trp Tyr Ala  
465                    470                    475                    480  
  
Asn Leu Asp Arg Ile Glu Thr Arg Phe Tyr Ile Asp Gln Tyr Gly Ala  
485                    490                    495  
  
Glu Ser Asp Val Trp Ile Gly Lys Thr Leu Tyr Arg Met Ala Tyr Val  
500                    505                    510  
  
Asn Asn Asn Asn Tyr Leu Glu Leu Ala Lys Leu Asp Tyr Asn Asn Cys  
515                    520                    525  
  
Gln Ala Gln His Leu Ile Glu Trp Asn Val Ile Gln Thr Trp Tyr Leu  
530                    535                    540  
  
Glu Ser Arg Leu Gly Glu Phe Gly Leu Ser Lys Arg Asp Leu Leu Leu  
545                    550                    555                    560  
  
Ala Tyr Phe Leu Ala Thr Gly Ser Ile Phe Glu Pro Glu Arg Ser His  
565                    570                    575  
  
Glu Arg Leu Ala Trp Ala Lys Thr Thr Ala Leu Leu Glu Thr Ile Lys  
580                    585                    590  
  
Cys Tyr Val Arg Asn Glu Asp Leu Arg Lys Asp Phe Ala Lys Lys Phe  
595                    600                    605  
  
Asn Asp His Ile Asp Val Arg Asp Tyr Ser Ile Ala Arg Arg Met Lys  
610                    615                    620  
  
Arg Asn Lys Thr Glu His Glu Leu Val Glu Ser Leu Phe Ala Thr Ile  
625                    630                    635                    640  
  
Gly Glu Ile Ser Trp Asp Val Arg Leu Ser Tyr Gly His Glu Ile Gly  
645                    650                    655  
  
Tyr Asp Met His Gln Cys Trp Lys Lys Trp Leu Ser Ser Trp Gln Ser  
660                    665                    670  
  
Glu Gly Asp Lys Cys Glu Gly Glu Ala Glu Leu Leu Ile Gln Ile Ile  
675                    680                    685  
  
Asn Leu Cys Ser Asn His Trp Ile Ser Glu Gly Pro Ser Met Gln Ser  
690                    695                    700

Thr Ile Gln His Leu Leu Gln Leu Thr Asn Ser Ile Cys His Lys Leu  
705 710 715 720

Ser Cys Tyr Gln Lys Asp Lys Glu Leu Lys Gly Ile Ser Cys Gln Glu  
725 730 735

Asn Ile Thr Asn Ser Glu Val Glu Ser Lys Met Gln Glu Leu Val Gln  
740 745 750

Met Val Phe Gln Lys Cys Pro Asn Asp Ile Asp Phe Asn Val Lys Asn  
755 760 765

Thr Phe Phe Thr Ile Ala Lys Ser Phe Tyr Tyr Ala Ala Phe Cys Asp  
770 775 780

Ser Arg Thr Ile Asn Phe His Ile Ala Lys Val Leu Phe Glu Lys Val  
785 790 795 800

Val

<210> 395  
<211> 789  
<212> PRT  
<213> Cucurbita maxima  
  
<400> 395

Met Tyr Leu Ser Arg Pro Thr Gly Val Ala Arg Phe Ala Ala Ser Ser  
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Ser Ser Ser Ser Ala Ser Leu Phe Pro Gly Val Asp Val Asp Thr  
20 25 30

Thr Thr Lys Thr Gly Ala Leu His Phe Glu Glu Thr Lys Glu Arg Ile  
35 40 45

Lys Lys Leu Phe Asp Lys Val Glu Leu Ser Val Ser Ala Tyr Asp Thr  
50 55 60

Ala Trp Val Ala Met Val Pro Ser Pro Asn Ser Leu Asn Gln Pro Leu  
65 70 75 80

Phe Pro Glu Cys Ile Asn Trp Val Leu Asp Ser Gln His Ala Asp Gly  
85 90 95

Ser Trp Gly Leu Leu His Asn Asp Gln Leu Leu Met Lys Ala Asn Leu  
100 105 110

Leu Ser Thr Leu Ala Cys Val Leu Thr Leu Lys Arg Trp Asn Ile Gly  
115 120 125

His Asp His Met Ser Lys Ala Leu Asp Phe Ile Lys Ser Asn Ile Ala  
130 135 140

Ser Ala Thr Asp Glu Asn Gln Arg Ser Pro Val Gly Phe Asp Ile Ile  
145 150 155 160

Phe Pro Gly Met Ile Glu Tyr Ala Lys Asp Leu Asn Leu Asn Leu Pro  
165 170 175

Leu Ala Pro Thr Asn Val Asp Ala Leu Val Arg Lys Lys Glu Leu Glu  
180 185 190

Leu Arg Ser Cys Arg Ser Asn Ser Glu Gly Gly Lys Ala Tyr Leu Ala  
195 200 205

Tyr Val Ser Glu Gly Ile Gly Lys Leu Gln Asp Trp Asp Met Val Met  
210 215 220

Gln Tyr Gln Arg Lys Asn Gly Ser Leu Phe Asn Ser Pro Ser Thr Thr  
225 230 235 240

Ala Ala Ala Phe Met His Arg Asn Asp Asp Gly Cys Phe Asp Tyr Leu  
245 250 255

Arg Ser Leu Leu Gln Lys Phe Asp Gly Ser Val Pro Thr Ile Tyr Pro  
260 265 270

Leu Asp Ile Tyr Ala Arg Leu His Met Val Asp Ser Leu Gln Lys Phe  
275 280 285

Gly Ile Ala Arg His Phe Lys Glu Glu Ile Arg Ser Val Leu Asp Glu  
290 295 300

Thr Tyr Arg Cys Trp Met Gln Gly Glu Glu Asn Ile Phe Leu Asp Ala  
305 310 315 320

Ser Thr Cys Ala Met Ala Phe Arg Met Leu Arg Val Glu Gly Tyr Asp  
325 330 335

Val Ser Ser Asp Gln Leu Thr Gln Phe Ser Glu Asp Ile Phe Pro Asn

340

345

350

Cys Leu Gly Gly Tyr Leu Lys Asp Phe Gly Ala Ser Leu Glu Leu Tyr  
355 360 365

Lys Ala Ser Gln Ile Ile Thr His Pro Asp Glu Ser Val Leu Glu Asn  
370 375 380

Ile Asn Ser Trp Thr Ser Arg Phe Leu Lys His Gly Leu Ser Ser Asp  
385 390 395 400

Ser Val Trp Ser Asp Arg Thr Asp Ser Val Val Lys Gln Glu Ala Val  
405 410 415

Asn Ala Leu Glu Phe Pro Tyr Asn Ala Thr Leu Glu Arg Leu Ile Ser  
420 425 430

Lys Arg Ala Met Glu Ser Tyr Ser Gly Asp Ile Val Arg Ile Ser Lys  
435 440 445

Ser Pro Tyr Ala Cys Leu Asn Phe Gly His Gln Asp Phe Leu Glu Leu  
450 455 460

Ala Val Glu Asp Phe Asn Thr Leu Gln Arg Ile His Leu Lys Glu Leu  
465 470 475 480

Glu Glu Leu Gln Arg Trp Val Val Glu Asn Lys Leu Asp Glu Leu Lys  
485 490 495

Phe Phe Arg Leu His Leu Gly Tyr Cys Tyr Phe Ala Ala Ala Ala Thr  
500 505 510

Leu Thr Asp Pro Glu Leu His Asp Ala Arg Ile Ala Trp Ala Gln Asn  
515 520 525

Gly Val Leu Thr Thr Val Val Asp Asp Phe Tyr Asp Gly Gly Ser  
530 535 540

Glu Glu Glu Leu Asp Asn Leu Ile Glu Leu Val Glu Lys Trp Asp Pro  
545 550 555 560

Asp Gly Glu Val Gly Tyr Cys Ser Lys Asp Val Glu Ile Val Phe Leu  
565 570 575

Ala Leu His Ser Thr Val Cys Glu Ile Gly Arg Arg Ala Leu Val Trp  
580 585 590

Gln Gly Arg Ser Val Met Arg Asn Val Ile Asp Gly Trp Leu Ala Leu  
595 600 605

Leu Lys Val Met Arg Lys Glu Ala Glu Trp Ser Thr Asn Lys Val Val  
610 615 620

Pro Ser Met Gly Glu Tyr Met Glu Gln Ala His Val Ser Phe Ala Leu  
625 630 635 640

Gly Pro Ile Ile Leu Pro Met Leu Phe Phe Val Gly Pro Lys Leu Ser  
645 650 655

Glu Glu Met Ile Gly Ser Cys Glu Tyr Gln Lys Leu Tyr Lys Leu Met  
660 665 670

Ser Thr Ala Gly Arg Leu Lys Asn Asp Ile Arg Ser Tyr Asp Arg Glu  
675 680 685

Cys Lys Glu Gly Lys Leu Asn Ile Leu Ser Leu Trp Met Ile Asp Gly  
690 695 700

Gly Gly Asn Val Thr Lys Glu Glu Ala Ile Glu Ala Ile Lys Gly Asp  
705 710 715 720

Phe Glu Arg Ala Ile Arg Glu Leu Leu Gly Leu Val Leu Gln Glu Asn  
725 730 735

Thr Thr Ile Pro Arg Ala Cys Lys Asp Leu Phe Trp Lys Leu Met Ser  
740 745 750

Ile Val Asn Leu Phe Tyr Met Glu Asp Asp Gly Tyr Thr Ser Asn Arg  
755 760 765

Leu Met Asn Thr Val Lys Ala Met Phe Glu Gln Pro Met Asp Leu Asp  
770 775 780

Ala Leu Leu Asn Lys  
785

<210> 396  
<211> 823  
<212> PRT  
<213> Zea mays  
  
<400> 396

Met Pro Tyr Pro His Pro Tyr Pro Trp Gln Ser Ser Arg Arg Arg Arg  
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Arg Arg Arg Gly Arg Asp Gly Ala Pro Arg Gln Pro Gln Ala Arg Arg  
20 25 30

Val Val Glu Arg Ala Ala Gly Pro Gly His Ala Thr Thr Thr Gln  
35 40 45

Gln Pro Asp Asn Val Ser Ser Ala Lys Val Phe Gln Thr Ser Arg Val  
50 55 60

Glu Thr Glu Ser Lys Leu Arg Asn Gly Arg Lys Pro Gln Asp Leu Glu  
65 70 75 80

Asp Glu His Gln Ala Glu Glu Ala Glu Leu Gln Pro Leu Ile Asp Gln  
85 90 95

Val Arg Ala Met Leu Arg Ser Met Asn Asp Gly Asp Thr Ser Ala Ser  
100 105 110

Ala Tyr Asp Thr Ala Trp Val Ala Met Val Pro Lys Val Gly Gly Asp  
115 120 125

Gly Gly Ala Gln Pro Gln Phe Pro Ala Thr Val Arg Trp Ile Val Asp  
130 135 140

His Gln Leu Pro Asp Gly Ser Trp Gly Asp Ser Ala Leu Phe Ser Ala  
145 150 155 160

Tyr Asp Arg Met Ile Asn Thr Leu Ala Cys Val Val Ala Leu Thr Lys  
165 170 175

Trp Ser Leu Glu Pro Ala Arg Cys Glu Ala Gly Leu Ser Phe Leu His.  
180 185 190

Glu Asn Met Trp Arg Leu Ala Glu Glu Glu Ala Glu Ser Met Pro Ile  
195 200 205

Gly Phe Glu Ile Ala Phe Pro Ser Leu Ile Gln Thr Ala Arg Asp Leu  
210 215 220

Gly Val Val Asp Phe Pro Tyr Gly His Pro Ala Leu Gln Ser Ile Tyr  
225 230 235 240

Ala Asn Arg Glu Val Lys Leu Lys Arg Ile Pro Arg Asp Met Met His

245

250

255

Arg Val Pro Thr Ser Ile Leu His Ser Leu Glu Gly Met Pro Asp Leu  
 260 265 270

Asp Trp Pro Arg Leu Leu Asn Leu Gln Ser Cys Asp Gly Ser Phe Leu  
 275 280 285

Phe Ser Pro Ser Ala Thr Ala Tyr Ala Leu Met Gln Thr Gly Asp Lys  
 290 295 300

Lys Cys Phe Glu Tyr Ile Asp Arg Ile Val Lys Lys Phe Asn Gly Gly  
 305 310 315 320

Val Pro Asn Val Tyr Pro Val Asp Leu Phe Glu His Ile Trp Val Val  
 325 330 335

Asp Arg Leu Glu Arg Leu Gly Ile Ser Arg Tyr Phe Gln Arg Glu Ile  
 340 345 350

Glu Gln Cys Met Asp Tyr Val Asn Arg His Trp Thr Glu Asp Gly Ile  
 355 360 365

Cys Trp Ala Arg Lys Ser Asn Val Lys Asp Val Asp Asp Thr Ala Met  
 370 375 380

Ala Phe Arg Leu Leu Arg Leu His Gly Tyr Asn Val Ser Pro Ser Val  
 385 390 395 400

Phe Lys Asn Phe Glu Lys Asp Gly Glu Phe Phe Cys Phe Val Gly Gln  
 405 410 415

Ser Thr Gln Ala Val Thr Gly Met Tyr Asn Leu Asn Arg Ala Ser Gln  
 420 425 430

Ile Ser Phe Gln Gly Glu Asp Val Leu His Arg Ala Arg Val Phe Ser  
 435 440 445

Tyr Glu Phe Leu Arg Gln Arg Glu Glu Gln Gly Met Ile Arg Asp Lys  
 450 455 460

Trp Ile Val Ala Lys Asp Leu Pro Gly Glu Val Gln Tyr Thr Leu Asp  
 465 470 475 480

Phe Pro Trp Tyr Ala Ser Leu Pro Arg Val Glu Ala Arg Thr Tyr Leu  
 485 490 495

Asp Gln Tyr Gly Gly Lys Asp Asp Val Trp Ile Gly Lys Thr Leu Tyr  
500 505 510

Arg Met Pro Leu Val Asn Asn Asp Thr Tyr Leu Glu Leu Ala Ile Arg  
515 520 525

Asp Phe Asn His Cys Gln Ala Leu His Gln Leu Glu Cys Asn Gly Leu  
530 535 540

Gln Thr Trp Tyr Lys Asp Asn Cys Leu Asp Ala Phe Gly Val Glu Pro  
545 550 555 560

Gln Asp Val Leu Arg Ser Tyr Phe Leu Ala Ala Ala Cys Ile Phe Glu  
565 570 575

Pro Ser Arg Ala Ala Glu Arg Leu Ala Trp Ala Arg Thr Ser Met Ile  
580 585 590

Ala Asn Ala Ile Ser Thr His Leu Arg Asp Ile Ser Glu Asp Lys Lys  
595 600 605

Arg Leu Glu Cys Phe Val His Cys Leu Tyr Glu Glu Asn Asp Val Ser  
610 615 620

Trp Leu Lys Arg Asn Pro Asn Asp Val Ile Leu Glu Arg Ala Leu Arg  
625 630 635 640

Arg Leu Ile Asn Leu Leu Ala Gln Glu Ala Leu Pro Ile His Glu Gly  
645 650 655

Gln Arg Phe Ile His Ser Leu Leu Ser Leu Ala Trp Thr Glu Trp Met  
660 665 670

Leu Gln Lys Ala Asn Lys Glu Glu Asn Lys Tyr His Lys Cys Ser Gly  
675 680 685

Ile Glu Pro Gln Tyr Met Val His Asp Arg Gln Thr Tyr Leu Leu Leu  
690 695 700

Val Gln Val Ile Glu Ile Cys Ala Gly Arg Ile Gly Glu Ala Val Ser  
705 710 715 720

Met Ile Asn Asn Lys Asp Asn Asp Trp Phe Ile Gln Leu Thr Cys Ala  
725 730 735

Thr Cys Asp Ser Leu Asn His Arg Met Leu Leu Ser Gln Asp Thr Met  
740 745 750

Lys Asn Glu Ala Arg Ile Asn Trp Ile Glu Lys Glu Ile Glu Leu Asn  
755 760 765

Met Gln Glu Leu Ala Gln Ser Leu Leu Leu Arg Cys Asp Glu Lys Thr  
770 775 780

Ser Asn Lys Lys Thr Lys Lys Thr Leu Trp Asp Val Leu Arg Ser Leu  
785 790 795 800

Tyr Tyr Ala Thr His Ser Pro Gln His Met Ile Asp Arg His Val Ser  
805 810 815

Arg Val Ile Phe Glu Pro Val  
820

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<211> 2705  
<212> DNA  
<213> Ginkgo biloba  
  
<400> 397  
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Lys Arg Ser Ser Phe Gly Phe Asn Ala Gln His Cys Val Arg Ser His  
35 40 45

Leu Arg Leu Arg Trp Asn Cys Val Gly Ile His Ala Ser Ala Ala Glu  
50 55 60

Thr Arg Pro Asp Gln Leu Pro Gln Glu Glu Arg Phe Val Ser Arg Leu  
65 70 75 80

Asn Ala Asp Tyr His Pro Ala Val Trp Lys Asp Asp Phe Ile Asp Ser  
85 90 95

Leu Thr Ser Pro Asn Ser His Ala Thr Ser Lys Ser Ser Val Asp Glu  
100 105 110

Thr Ile Asn Lys Arg Ile Gln Thr Leu Val Lys Glu Ile Gln Cys Met  
115 120 125

Phe Gln Ser Met Gly Asp Gly Glu Thr Asn Pro Ser Ala Tyr Asp Thr  
130 135 140

Ala Trp Val Ala Arg Ile Pro Ser Ile Asp Gly Ser Gly Ala Pro Gln  
145 150 155 160

Phe Pro Gln Thr Leu Gln Trp Ile Leu Asn Asn Gln Leu Pro Asp Gly  
165 170 175

Ser Trp Gly Glu Glu Cys Ile Phe Leu Ala Tyr Asp Arg Val Leu Asn  
180 185 190

Thr Leu Ala Cys Leu Leu Thr Leu Lys Ile Trp Asn Lys Gly Asp Ile  
195 200 205

Gln Val Gln Lys Gly Val Glu Phe Val Arg Lys His Met Glu Glu Met  
210 215 220

Lys Asp Glu Ala Asp Asn His Arg Pro Ser Gly Phe Glu Val Val Phe  
225 230 235 240

Pro Ala Met Leu Asp Glu Ala Lys Ser Leu Gly Leu Asp Leu Pro Tyr  
245 250 255

His Leu Pro Phe Ile Ser Gln Ile His Gln Lys Arg Gln Lys Lys Leu  
260 265 270

Gln Lys Ile Pro Leu Asn Val Leu His Asn His Gln Thr Ala Leu Leu  
275 280 285

Tyr Ser Leu Glu Gly Leu Gln Asp Val Val Asp Trp Gln Glu Ile Thr  
290 295 300

Asn Leu Gln Ser Arg Asp Gly Ser Phe Leu Ser Ser Pro Ala Ser Thr  
305 310 315 320

Ala Cys Val Phe Met His Thr Gln Asn Lys Arg Cys Leu His Phe Leu  
325 330 335

Asn Phe Val Leu Ser Lys Phe Gly Asp Tyr Val Pro Cys His Tyr Pro  
340 345 350

Leu Asp Leu Phe Glu Arg Leu Trp Ala Val Asp Thr Val Glu Arg Leu  
355 360 365

Gly Ile Asp Arg Tyr Phe Lys Lys Glu Ile Lys Glu Ser Leu Asp Tyr  
370 375 380

Val Tyr Arg Tyr Trp Asp Ala Glu Arg Gly Val Gly Trp Ala Arg Cys  
385 390 395 400

Asn Pro Ile Pro Asp Val Asp Asp Thr Ala Met Gly Leu Arg Ile Leu  
405 410 415

Arg Leu His Gly Tyr Asn Val Ser Ser Asp Val Leu Glu Asn Phe Arg  
420 425 430

Asp Glu Lys Gly Asp Phe Phe Cys Phe Ala Gly Gln Thr Gln Ile Gly  
435 440 445

Val Thr Asp Asn Leu Asn Leu Tyr Arg Cys Ser Gln Val Cys Phe Pro

450

455

460

Gly Glu Lys Ile Met Glu Glu Ala Lys Thr Phe Thr Thr Asn His Leu  
465 470 475 480

Gln Asn Ala Leu Ala Lys Asn Asn Ala Phe Asp Lys Trp Ala Val Lys  
485 490 495

Lys Asp Leu Pro Gly Glu Val Glu Tyr Ala Ile Lys Tyr Pro Trp His  
500 505 510

Arg Ser Met Pro Arg Leu Glu Ala Arg Ser Tyr Ile Glu Gln Phe Gly  
515 520 525

Ser Asn Asp Val Trp Leu Gly Lys Thr Val Tyr Lys Met Leu Tyr Val  
530 535 540

Ser Asn Glu Lys Tyr Leu Glu Leu Ala Lys Leu Asp Phe Asn Met Val  
545 550 555 560

Gln Ala Leu His Gln Lys Glu Thr Gln His Ile Val Ser Trp Trp Arg  
565 570 575

Glu Ser Gly Phe Asn Asp Leu Thr Phe Thr Arg Gln Arg Pro Val Glu  
580 585 590

Met Tyr Phe Ser Val Ala Val Ser Met Phe Glu Pro Glu Phe Ala Ala  
595 600 605

Cys Arg Ile Ala Tyr Ala Lys Thr Ser Cys Leu Ala Val Ile Leu Asp  
610 615 620

Asp Leu Tyr Asp Thr His Gly Ser Leu Asp Asp Leu Lys Leu Phe Ser  
625 630 635 640

Glu Ala Val Arg Arg Trp Asp Ile Ser Val Leu Asp Ser Val Arg Asp  
645 650 655

Asn Gln Leu Lys Val Cys Phe Leu Gly Leu Tyr Asn Thr Val Asn Gly  
660 665 670

Phe Gly Lys Asp Gly Leu Lys Glu Gln Gly Arg Asp Val Leu Gly Tyr  
675 680 685

Leu Arg Lys Val Trp Glu Gly Leu Leu Ala Ser Tyr Thr Lys Glu Ala  
690 695 700

Glu Trp Ser Ala Ala Lys Tyr Val Pro Thr Phe Asn Glu Tyr Val Glu  
705 710 715 720

Asn Ala Lys Val Ser Ile Ala Leu Ala Thr Val Val Leu Asn Ser Ile  
725 730 735

Phe Phe Thr Gly Glu Leu Leu Pro Asp Tyr Ile Leu Gln Gln Val Asp  
740 745 750

Leu Arg Ser Lys Phe Leu His Leu Val Ser Leu Thr Gly Arg Leu Ile  
755 760 765

Asn Asp Thr Lys Thr Tyr Gln Ala Glu Arg Asn Arg Gly Glu Leu Val  
770 775 780

Ser Ser Val Gln Cys Tyr Met Arg Glu Asn Pro Glu Cys Thr Glu Glu  
785 790 795 800

Glu Ala Leu Ser His Val Tyr Gly Ile Ile Asp Asn Ala Leu Lys Glu  
805 810 815

Leu Asn Trp Glu Leu Ala Asn Pro Ala Ser Asn Ala Pro Leu Cys Val  
820 825 830

Arg Arg Leu Leu Phe Asn Thr Ala Arg Val Met Gln Leu Phe Tyr Met  
835 840 845

Tyr Arg Asp Gly Phe Gly Ile Ser Asp Lys Glu Met Lys Asp His Val  
850 855 860

Ser Arg Thr Leu Phe Asp Pro Val Ala  
865 870

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gccctagcag ccggccattt gttcaaaatg catatgaccc acaacaggaa acctgctgaa	1500
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gtatataaaaa aggttctcggtt gttgtatgtatataaaaa agtggaaatc gatttcaaga 180  
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gttttaacc actgttgtat ttctttccat aatcttgcgt tttccatgtaa cccattatgg 1260  
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 <212> DNA  
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caaaaactatt acttggtcac taaccccaa gtcatctcta gcaatttaaa tttcaatttt	180
aagaaaacct ttatttatcc aacgtgaaca agtactttca agcacttctg cccaccgcta	240
tatcgtggaa aaatgtgtca agctaccaat ggcccagta gagttgtgac taaaaagcat	300
aggaaaatttt tcgaaagaca tctacagttt cttccctttt cacatcaggg acatgacgtg	360
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cacgcaacaa cgattaatct accaaatact ctctttgtat tgttgtccat gattatgtcg	600
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<212>	DNA					
<213>	Saccharomyces cerevisiae					
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tcaccttaca	cgagcagaga	aaagggcagc	aatagcgaca	ataaccgata	atgccaggcc	180
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<212> DNA  
<213> *Saccharomyces cerevisiae*

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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